DAINTREE RIVER FERRY UPGRADE

Town Planning Report - Development Application for Operational Works (Prescribed Tidal Works) and Material Change of Use for Environmentally Relevant Activity 16 (Extractive and Screening Activities)



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Document status

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Approval for issue

Patrick Clifton  30 September 2025

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SUMMARY

Table 1: Summary

Details			
Site Address:	362 Cape Tribulation Road, Lower Daintree QLD 4873		
Real Property Description:	• Lot 2 RP865069 • Lot 4 SP126928 • Lot 1 RP804943 • Lot 359 SP215752 • Coastal Land adjacent the above; and, • The Cape Tribulation Road, Daintree River Crossing.		
Zone:	• Lot 2 – Rural Zone • Lot 4 – Rural Zone • Lot 1 – Rural Zone • Lot 359– Conservation Zone		
Owner(s):	• Lot 2 – Douglas Shire Council • Lot 4 - Douglas Shire Council • Lot 1 - Douglas Shire Council • Lot 359 - Douglas Shire Council • Coastal Land below mean high water mark – State of Queensland.		
Proposal			
Brief Description/ Purpose of Proposal	• Operational Works (Prescribed Tidal Works); • Operational Work (Marine Plant Disturbance); • Operational Works (Interfering with Quarry Material above High-water Mark) • Material Change of Use (Environmentally Relevant Activity 16 – Extractive and Screening Activities) • Environmental Authority.		
Application Details			
Aspect of Development	**Preliminary approval**		**Development permit**
Material change of use	☐		☒
Building Work	☐		☐
Operational Work	☐		☒
Reconfiguration of a Lot	☐		☐
Assessment Category	☒ Code		☐ Impact
Public Notification	☒ No		☐ Yes
Superseded Planning Scheme Application	☐ Yes		☒ No
Referral Agencies			
Agency	**Concurrence**	**Advice**	**Pre-lodgement response**
State Assessment and Referral Agency with technical advice from:	☒	☐	☐ Yes ☒ No

- Department of Environment, Technology, and Science (DETSI);
- Department of Natural Resources and Mines, Manufacturing and Regional and Rural Development (DNRMMRR);and
- Department of Primary Industries (DPI).

Pre-lodgement / Consultation

Entity		Date	Contact Name
SARA, DETSI, DNRMMRR, and DPI	☒ Yes ☐ No	7 February 2025	Sue Lockwood
Applicant contact person	Patrick Clifton Senior Principal Planner (Practice Lead) D: +61 7 4031 1336 **E: patrick.clifton@rpsconsulting.com**		

1 INTRODUCTION

RPS AAP Consulting Pty Ltd has been engaged by Douglas Shire Council (DSC) to seek Development Approval for the upgrade of the Daintree River Ferry. The upgrade works are to be commissioned under a Design & Construct contract, which has recently been tendered.

This development application seeks approval for:

- Development Permit for Operational Works (Prescribed Tidal Works, Marine Plant Disturbance, Interfering with Quarry Material above the High-water Mark);
- Development Permit for Operational Works (Civil Works for accessways, car parking and spoil disposal area);
- Development Permit for Material Change of Use for the undertaking of an Environmentally Relevant Activity (ERA16); and
- An Environmental Authority to undertake the ERA.

The site the subject of the application is the current Daintree River Ferry crossing and adjacent land located at Cape Tribulation Road, Lower Daintree QLD 4873, and described as Lot 2 RP865069, Lot 4 SP126928, Lot 1 RP804943 and Lot 359 SP215752. The site of the subject of the works includes an expanded Ferry Crossing across the Daintree River, the road reserve either side of the river and land above the highwater mark on the southern side of the Daintree River.

The existing Daintree Ferry has reached capacity with the increased patronage resulting in extended wait times and queues of up to several kilometres along Cape Tribulation Road. The proposed upgrades are intended to increase the carrying capacity of the Ferry operation, reduce wait times and improve highway safety.

The proposal involves:

- Upgrade of the existing ferry to a new 49 x 16m wide Ferry to accommodate additional demand, accommodating and additional 9 vehicles per trip;
- Upgrade of the existing ferry ramps to accommodate the larger ferry;
- An increase in the width of the area of the Daintree River that is dredged to accommodate the wider ferry;
- A new bunded dredge disposal area to the east of the southern ferry access to accommodate the dredge spoil;
- Upgrade and widening of the ferry access to 4-6 lanes and 150 metres long to accommodate the traffic entering and egressing the upgraded ferry;
- Additional car parking areas and pedestrian walkways
- Associated upgrades to the road network, including new priority lanes to allow improved access for residents, additional car parking and alternate routes to adjoining uses and new pedestrian footpaths linking the ferry terminal to the parking areas and information centres.

The proposed Operational Works are defined as 'Tidal Works' under the *Planning Regulation 2017*. In accordance with Schedule 10, Part 17, of the Regulation, the proposed works are identified as Assessable Development requiring Code Assessment. In addition, the dredging of the river to maintain the Ferry crossing is identified as an Environmentally Relevant Activity (ERA16 – dredging of a minimum of 1,000 tonne in a year).

In accordance with Schedule 10, Part 5 of the Regulation, undertaking an ERA is a Material Change of Use that is subject to Code Assessment. Therefore, the proposed works are assessable development and require the approval of a Code Assessable development application. In association with the application for the Environmentally Relevant Activity, it is proposed to also apply for an Environment Authority.

Under the Douglas Shire Planning Scheme, the land is identified within the Rural Zone and the Conservation Zone. The majority of the works would occur within the Rural Zone and Conservation Zone or within the road reserve.

Pursuant to Schedule 6, Part 3, Section 8 of the *Planning Regulation 2018*, the proposed works within the road reserve are considered to be Operational Works by or for a public sector entity and cannot be made assessable under the planning scheme. The operation works undertaken in the lots comprising the subject site are identified as code assessable in the Tables of Assessment contained within the Planning Scheme.

This report provides greater detail on the nature of the proposal and provides an assessment of the proposal against the applicable Codes of the relevant statutory planning documents. Technical issues associated with the proposal are addressed in appended technical reports.

Based on these assessments the proposal is recommended for approval subject to reasonable and relevant conditions.

2 SITE DETAILS

2.1 Daintree Ferry

The site the subject of the application is the site of the current Daintree Ferry and associated facilities located at Cape Tribulation Road, Lower Daintree and described as Lot 2 RP865069, Lot 4 SP126928, Lot 1 RP804943 and Lot 359 SP215752. The site of the subject of the works includes an expanded Ferry Crossing across the Daintree River, the road reserve either side of the river and land above the highwater mark on the southern side of the Daintree River.

Lot 2 contains an area of 2,000m^2 and has frontage to Cape Tribulation Road to the north, It is currently vacant and is used for informal car parking. Lot 4 is an irregular shaped lot with an area of 6,609m^2 and it has been developed with the Cape Tribulation Ferry Road South that provides an alternate access to the ferry from Cape Tribulation Road and through Lot 359 to the north. Lot 1 has an area of 2,043m^2 and frontage to Cape Tribulation Road. It is located to the east of Lot 2, to the North of Lot 4 and to the west of lot 359 and contains an existing dwelling and its curtilage. Lot 359 has an area of 5,943m^2 and contains a public toilet and the extension of Cape Tribulation Ferry Road South.

In addition to works occurring within the above-mentioned lots, as part of the development and upgrades, works would occur within the Cape Tribulation Road Reserve either side of the Daintree River and within the River itself.

The locality containing the site is predominantly rural in nature with land either being used for the cultivation of sugar cane or preserved for conservation purposes.

The lots the subject of the application are shown in **Figure 1** below.



Figure 1: Lots the subject of the application

Source: Queensland Globe

2.2 Daintree River

As part of the development it is proposed to provide for the maintenance dredging of the Daintree River to ensure the continued operation of the Ferry. The proposed dredge area would be approximately 25 metres wide and would extend the full width of the Daintree River and having a total area of aporximatley10,360m^2. The proposed dredge area is illustrated in **Figure 2** below.

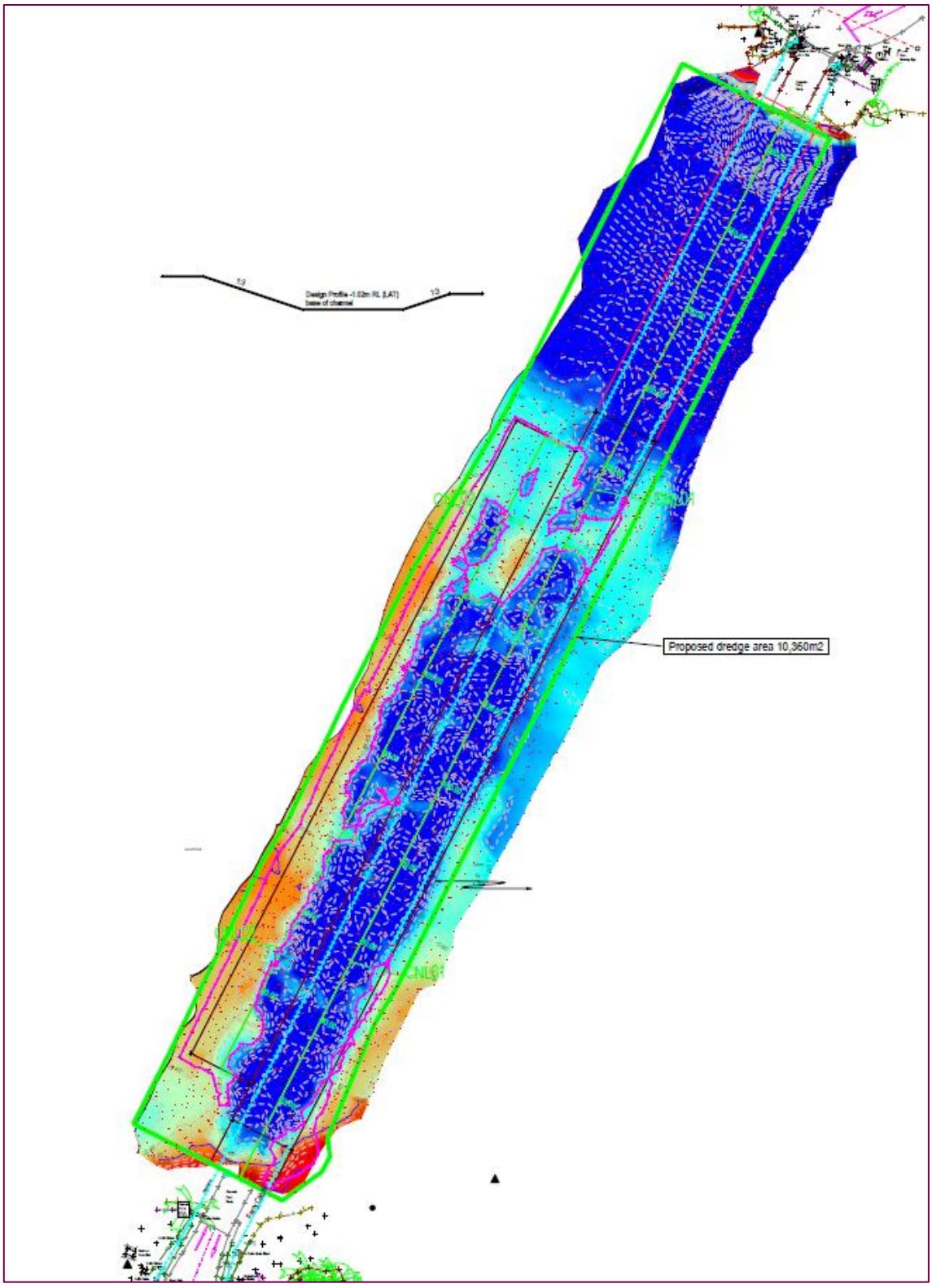


Figure 2 Proposed Dredge Area

Source: RPS AAP Consulting Pty Ltd

Key details of the subject site are as follows:

Table 2: Site Particulars

Site Particulars

Site Address	Cape Tribulation Road, Lower Daintree QLD 4873			
Real Property Description	Lot 2 RP865069	Lot 4 SP126928	Lot 1 RP804943	Lot 359 SP215752
Site Area	2,000m^2	6,609m^2	2,043m^2	5,943m^2
Landowner(s)	Douglas Shire Council			

Certificates of title confirming land ownership are provided at **Appendix C.**

2.3 Planning Context

The planning context of the site includes the following:

Table 3: Planning Context

Instrument	Designation
State Planning Policy	
Economic Growth	• Agriculture – Important Agricultural Area
Environment and Heritage	• MSES - Regulated vegetation (category B) • MSES - Regulated vegetation (essential habitat), in part; • MSES - Wildlife habitat (endangered or vulnerable), in part; • MSES - Wildlife habitat (special least concern animal); • MSES - Marine park (highly protected areas); and, • MSES - Regulated vegetation (category R).
Coastal Environment	• Coastal Management District, in part.
Safety and Resilience to Hazards	• Flood hazard area – Local Government Flood Mapping, in part; • Medium storm tide inundation area; • Level 1 - Queensland floodplain assessment overlay; • High storm tide inundation area; and, • Erosion Prone Area.
Development Assessment Mapping	
Coastal Protection	• Coastal Management District; • Coastal area – erosion prone area; • Coastal area – medium storm tide inundation area; and, • Coastal area – high storm tide inundation area.
Fish Habitat Areas	• Major (tidal)
Native Vegetation Clearing	• Regulated vegetation management map (Other vegetation categories) • Vegetation; • Essential habitat; • Regulated vegetation management map (Category A and B extract); and, • Category A or B area containing endangered regional ecosystems.
Maritime Safety and Development	• Navigable waterways
FNQ Regional Plan 2009 - 2031	
Regional Plan	• Regional Landscape and Rural Production Area
Douglas Shire Planning Scheme (2018)	
Zoning	• Rural Zone / Conservation Zone

Instrument	Designation

Overlays	• Acid Sulfate Soils - Acid Sulfate Soils (< 5m AHD)
	• Coastal Environment
	  ○ Coastal Management District
	  ○ Erosion Prone Area
	• Flood and Storm Tide Hazard
	  ○ Medium Storm Tide Hazard
	  ○ High Storm Tide Hazard
	  ○ Floodplain Assessment Overlay (Daintree River)
	• Landscape Values
	  ○ Gateway
	  ○ Scenic route
	  ○ Scenic route buffer
	• Natural Areas
	  ○ MSES - Wildlife Habitat
	  ○ MSES - Regulated Vegetation
	  ○ MSES - Marine Park
	• Place of Significance
	  ○ Place of Local Significance (Daintree Ferry Landing and Crossing Site)
	• Transport Network Overlay
	  ○ Iconic Recreation Route
	  ○ Sub Arterial Road

The Zoning of the subject site and surrounding lands is shown on **Figure 3.** Other relevant mapping, including overlays, regional plan and state interests is provided at **Appendix D.**

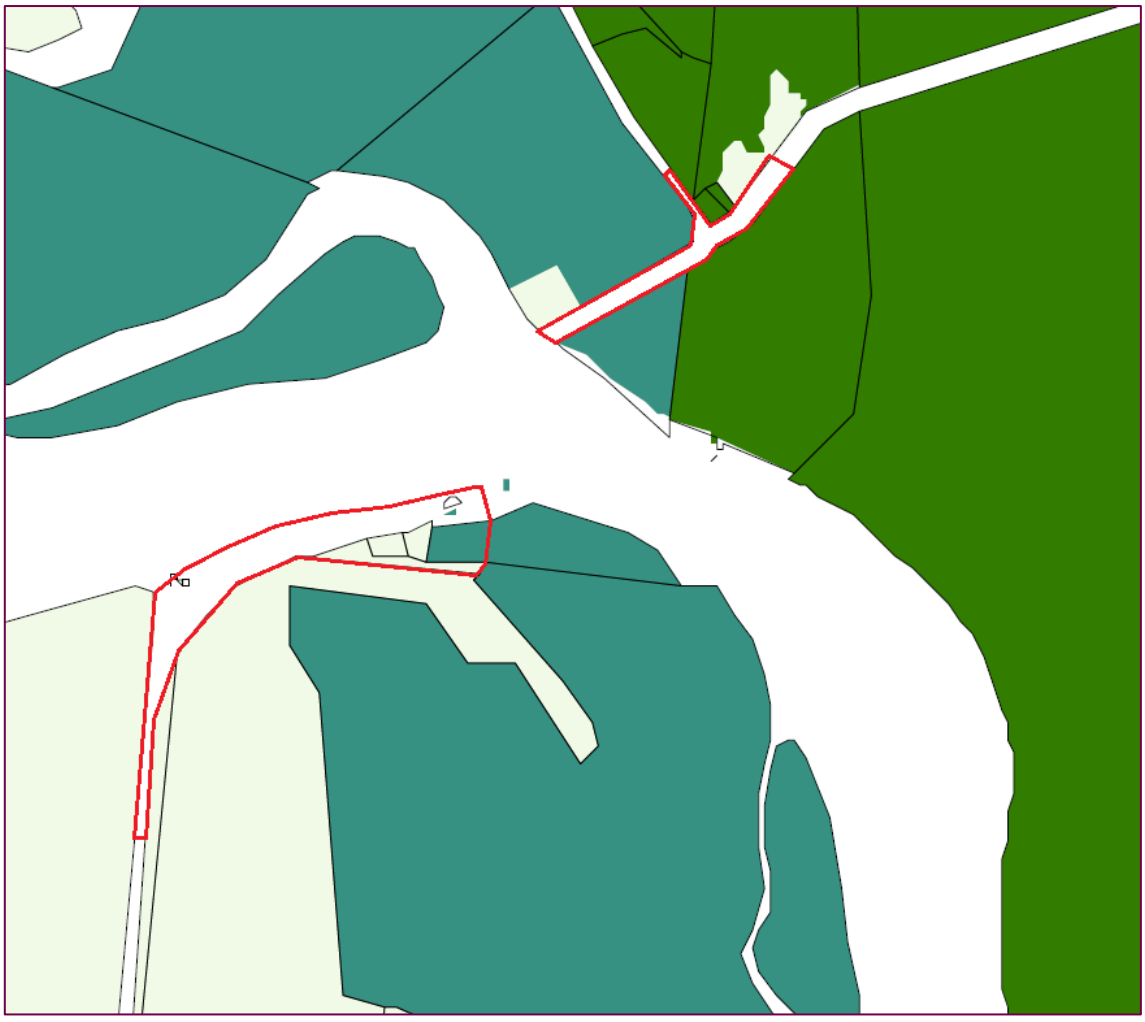


Figure 3 Zoning

Source: Douglas Shire Planning Scheme 2018

2.4 Previous Approvals

The site is subject to several extant permits issued by Queensland Government Departments, relating primarily to authorities to undertake dredging for the Daintree River Ferry. Permits which have been obtained are summarised within **Table 4.**

Table 4: Relevant Approvals

Reference No.	Description	Approving Entity
CNS2100(152)	S86 Sanction – Dredging of Daintree River Ferry Crossing	Environmental Protection Agency
EPPR01803613	Environmental Authority - ERA 16(1a) - ERA 57(2a)	Department of Environment and Heritage Protection
MPW2014/GBRC0016-1	Marine Park Permit	Department of Environment and Science

A copy of this approval is included at **Appendix E**.

3 PROPOSAL

The application is submitted in order to facilitate the upgrade of the Daintree Ferry facilities to increase the carrying capacity of the ferry resulting in a decrease of wait times and improved highway safety. The upgrades include the replacement of the existing ferry with a larger ferry capable of accommodating a larger number of vehicles, an increased in the size of the ferry ramps on the north and south side of the Daintree River, an improved spoil disposal area to the east of the ferry ramp on the southern side of the river and improved pedestrian and vehicular access in and around the ferry terminals.

Specifically, the proposal involves:

- Upgrade of the existing ferry to a new 49 x 16m wide Ferry to accommodate additional demand, accommodating and additional 9 vehicles per trip;
- Upgrade of the existing ferry ramps to accommodate the larger ferry;
- An increase in the width of the area of the Daintree River that is dredged to accommodate the wider ferry;
- A new bunded dredge disposal area to the east of the southern ferry access to accommodate the dredge spoil;
- Upgrade and widening of the ferry access to 4-6 lanes and 150 metres long to accommodate the traffic entering and egressing the upgraded ferry;
- Additional car parking areas and pedestrian walkways
- Associated upgrades to the road network, including new priority lanes to allow improved access for residents, additional car parking and alternate routes to adjoining uses and new pedestrian footpaths linking the ferry terminal to the parking areas and information centres.

In association with the land based developments and in order to accommodate the larger ferry, it is proposed to increase the maintenance dredge area to approximately 25 metres wide for the full width of the Daintree River. The dredging would involve the maintenance of a channel with a design profile of a depth no less than -1.02m RL with a battered slope either side of 1:3. The area of the river to be dredged is in the order of 10,360m^2. The volume of dredge material will depend on the ebb and flow of the river and the amount of sedimentation; however, it is assumed that the additional volume dredged per annum would be up to 10,000m^3. Dredging would be undertaken by along reach excavator and articulated vehicle from the ferry deck. The excavated material would be loaded to the articulated vehicle and transported to the spoil storage area located to the east of the ferry ramp in the southern side.

The spoil would be stored in a bunded area and tested prior to reuse for the purpose of beach replenishment.

In support of application are the following:

Appendix F: Proposal plans, by Trinity Engineering and Consulting

Appendix G: Basis of Design, Daintree Ferry Landside Infrastructure, Handen Engineering Group

Appendix G: Proposed dredge area, by RPS

Appendix H: Geotechnical Investigation by GEO Design

Appendix I: Ecological Assessment, dated July 2025, by 4 Elements

Appendix J: An Environmental Management Plan, dated July 2025, prepared by 4 Elements

Appendix K: A Protected Plant Survey, dated August 2024, prepared by 4 Elements.

4 LEGISLATIVE REQUIREMENTS

4.1 Landowner Consent

As part of the development it is proposed to dredge spoil from below the high water mark for the purpose of maintaining the operational ferry channel.

In accordance with section 51 of the *Planning Act 2016*, the application is required to be accompanied by the written consent of the landowner (Department of Resources). A copy of the Application form, including the application for an Environmental Authority, is provided at **Appendix A** and the landowners Consent at **Appendix B**.

4.2 Assessment Manager

In accordance with Schedule 8 of the *Planning Regulation 2017*, the assessment manager for this application is the Douglas Shire Council.

4.3 Categories of Assessment

The table below summarises the categorising instruments and categories of assessment applicable to this application.

Table 5: Categories of Assessment

Aspect of development	Categorising instrument	Category of assessment
Ferry Upgrade (Tidal Works)	*Planning Regulation 2017* Schedule 10 Part 17, Division 1.	Code Assessment
Sand Extraction (Environmentally Relevant Activity).	*Planning Regulation 2017* Schedule 10 Part 5, Division 2.	Code Assessment
Operational Works (New accessways, car parking and footpaths)	Douglas Shire Planning Scheme 2018, section 5.6	Code Assessment

4.4 Referrals

In accordance with Schedule 10 the *Planning Regulation 2017*, the follow referrals apply.

Table 6: Schedule 10 Referral Matters

Schedule 10	Referral topic and reason	Referral Agency
10.5.4.2	Material change of use for an environmentally relevant activity (non-devolved)	SARA, DSDMIP
10.6.3.3.1	Operational work involving removal, destruction or damage of marine plants	SARA, DSDMIP
10.17.3.1	Operational work that is tidal works or work in a coastal management district.	SARA, DSDMIP
10.17.3.2	Operational work that is in tidal waters (maritime safety)	SARA, DSDMIP

A referral for the clearing of native vegetation is not required as the site the subject of the application does not contain a lot with an area of 5 hectares or larger. Similarly, a referral for waterway barrier works is not required as the waterway is tidal.

In respect of operational works in the Wetland Protection Area, is not considered to require a referral as the works would not change the form of the land in a way that diverts water to or form a wetland protection area.

4.5 Public Notification

This application does not require public notification as it is subject to code assessment only.

5 STATUTORY PLANNING ASSESSMENT

5.1 Overview

This section assesses the application against relevant assessment benchmarks.

As the application is subject to code assessment, the assessment benchmarks, and the matters the assessment manager must have regard to, are those identified in section 45(3) of the *Planning Act 2016* and sections 26 and 27 of the *Planning Regulation 2017*.

As Douglas Shire Council is the assessment the relevant local authority categorising instrument is the Douglas Shire Planning Scheme 2018.

5.2 State and Regional Assessment Benchmarks

5.2.1 State Planning Policy

Section 26(2)(a)(ii) of the *Planning Regulation 2017* requires the assessment manager to assess the application against the assessment benchmarks stated in the State Planning Policy, Part E, to the extent Part E of the State Planning Policy is not identified in the planning scheme as being appropriately integrated into the planning scheme.

Part 2, Section 2.1 of the Douglas Shire Planning Scheme confirms that aspects of the State Planning Policy relevant to the Douglas Shire have been appropriate integrated into the planning scheme. On this basis, no further assessment is required in this instance.

5.2.2 Regional Plan

Section 26(2)(a)(i) of the *Planning Regulation 2017* requires the assessment manager to assess the application against the assessment benchmarks stated in the regional plan, to the extent the Regional Plan is not identified in the planning scheme as being appropriately integrated into the planning scheme.

The site is located within the *Far North Queensland Regional Plan 2009-2031*. Part 2, Section 2.2 of the Douglas Shire Planning Scheme confirms that the Minister has identified that the planning scheme appropriately advances the *Far North Queensland Regional Plan 2009-2031*, as it applied in the planning scheme area.

5.2.3 Development Assessment under Schedules 10 (SDAP)

Schedule 10 of the *Planning Regulation 2017* identifies the matters that the assessment manager and/or referral agency assessment must have regard to.

The State Development Assessment Provisions (SDAP) nominate applicable State Codes based on the referral triggers. The State Codes that require consideration in respect of this proposal are identified in the table below.

Table 7 Relevant SDAP State Codes

Schedule 10	Referral Topic	State Code
10.5.4.2	Environmentally relevant activities Non-devolved environmentally relevant activities	State code 22 – Environmentally relevant activities.
10.6.3.3.1	Operational Work involving marine plants.	State code 11 – Removal, destruction or damage of marine plants.
10.17.3.1	Tidal works or work in a coastal management district Assessable development under s 28	State code 8 – Coastal development and tidal works.
10.17.3.2	Operational work that is in tidal waters (maritime safety)	State code 7: Maritime Safety

5.2.3.1 State Code 22 – Environmentally Relevant Activities

Schedule 10, Part 5, Division 2, Section 8 of the *Planning Regulation 2017,* identifies the material change of use of premises for the purpose of an Environmentally Relevant Activity (ERA) that is a concurrence ERA is assessable development. In this instance the removal of 1,000 tonne or more of material from the bed of a naturally occurring surface waters in a year is identified as an Environmentally relevant Activity (ERA16). The proposed dredging of up to an additional 10,000 tonne is considered to be an ERA that is requires a Material Change of Use application and is required to be considered against State Code 22.

The purpose of this code is to ensure that environmentally relevant activities (ERAs) are located and designed to avoid or manage environmental harm on environmental values of the natural environment, adjacent sensitive land uses and sensitive receptors and prevent significant residual impact on a matter of state environmental significance. In this instance, the assessment against the state code is triggered as a result of the maintenance dredging of the wider ferry channel.

An assessment of the proposal against the state code indicates that the proposed development would not result in environmental harm as a result of noise or air pollution. It would not affect water quality or result in the release of contaminants and would not otherwise have a significant residual impact on a matter of State Environmental Significance. The proposed development is considered to comply with the State Code.

In order to operate the Environmentally Relevant Activity the application includes an application for an Environmental Authority. The Douglas Shire Council is identified as a suitable operator, reference number 160452.

Plans of the extent of the potential dredge area is attached at **Appendix G** and a detailed response to State Code 22 – Environmentally Relevant Activities is provided at **Appendix M**.

5.2.3.2 State Code 11 – Removal, destruction or damage of marine plants

The *Planning Regulation 2017* identifies operational work involving the removal or damage of marine plants as assessable development that is required to be assessed against State Code 11.

The purpose of State Code 11 is to, inter alia, ensure that development which involves the removal, destruction or damage of marine plants maintains the extent, distribution, diversity and condition of marine plant communities and protects the ecological functions to which they contribute avoid or manage impacts on matters of state environmental significance and avoid significant residual impact on a matter of state environmental significance unless the significant residual impact is acceptable, and an offset is provided.

It is understood that the area to be considered for the purpose of determining marine plant disturbance is those areas below the Highest Astronomical Tide (HAT). In terms of calculating a significant residual impact, only those areas of permanent works below HAT were considered for the purpose of any environmental offset.

An assessment of the impact on Marine Plants has been undertaken by 4 Elements as part of the Ecological Assessment. The assessment has identified that the proposed development would result in the clearing of 0.4 hectares of Marine Plants. It is proposed that this clearing be addressed through a financial offset

The Ecological Assessment identifying the extent of Marine Plant disturbance is attached at **Appendix I** and a detailed response to State Code 11- Removal, destruction or damage of marine plants is provided at **Appendix M**.

5.2.3.3 State Code 8 – Coastal Development and Tidal Works

The *Planning Regulation 2017* identifies tidal works within a Coastal Management District as being Assessable Development. The proposed sea walls are considered to constitute tidal works and are required to be assessed against the benchmarks contained within State Code 8.

The purpose of this code is to ensure, amongst other matters, that development is designed and located to protect life, buildings and infrastructure from the impact of coastal erosion, maintain coastal processes, account for the projected impacts of climate change, avoid or minimise impacts on matters of state environmental significance and ensure that development does not result in a significant residual impact.

The proposed works involves the replacement of existing ferry facilities with larger ferry facilities to accommodate the increased need. The works would not significantly adversely affect coastal processes or

result in a significant residual impact on Matters of State Environmental Significance The proposed development is considered to be consistent with the requirements of the state code.

A detailed response to State Code 8 – Coastal Development and Tidal Works is provided at **Appendix M**.

5.2.3.4 State Code 7 – Maritime Safety

The *Planning Regulation 2017* identifies operational work involving works within a navigable waterway as requiring assessment against State Code 7: Maritime Safety.

The purpose of State Code 7 is to protect the safety of people using , and living or working near navigable waterways. Specifically, the code seeks to ensure that development does not compromise the viable operation of navigation aids and the safe operation of vessels in navigable waterways.

The proposal is for the replacement of existing ferry infrastructure with new and larger ferry infrastructure. Its operation would be largely consistent with the existing operation, including executions plans and cyclone plans.

A detailed response to State Code 7 – Maritime Safety is provided at **Appendix M.**

5.3 Allocation of Quarry Material

Pursuant to the *Coastal Protection and Management Act 1995* section 101, Removing Quarry Materials, A person must not, without reasonable excuse, remove quarry material from tidal water unless the person is the holder of an allocation notice for the material.

A quarry material allocation is needed where dredging activity results in the removal of material from land under tidal waters owned by the State and where the material is disposed of above the high-water mark.

If quarry material is removed from land under tidal water and moved or otherwise placed to another location below the high-water mark, then that activity does not require a quarry material allocation but is deemed operational works and requires a Development Approval, due to the material being disposed of in tidal waters.

In accordance with DETSI guidelines, we consider that Quarry material allocation is not required in this case as a reasonable excuse for removing quarry material without an allocation notice is that the material is removed as a necessary part of the construction and ongoing maintenance of an approved tidal work, and

- is of no commercial value or commercial benefit, and
- is not required for maintaining coastal processes in adjacent areas and cannot be returned to tidal water.

5.4 Environmental Offsets

An environmental offset compensates for unavoidable impacts on significant environmental matters, (e.g. valuable species and ecosystems) on one site, by securing land at another site, and managing that land over a period of time, to replace those significant environmental matters which were lost.

Under the *Environmental Offsets Act 2014* an environmental offset is defined as an activity undertaken to counterbalance a significant residual impact of a prescribed activity on a prescribed environmental matter.

In accordance with the General guide for the Queensland Environmental Offsets Framework (V1.05), an environmental offset is only considered where:

- an application for an authority is first required
- the assessment requires consideration of an environmental offset as a suitable outcome.

In this instance the only trigger for the consideration of an environmental offset relates to the damage to marine plants.

The Environmental Assessment, provided at **Appendix J,** identifies that the proposed works would result in the following:

- The removal of 0.02 ha of Of Concern RE 7.1.4a.

- Impact on 0.24 ha of HES Wetland.
- The removal of 0.3 ha of Essential Habitat.
- The removal of 0.3 ha of Wildlife Habitat.
- Damage to 0.4 ha of Marine Plants

However, the vegetation damage, impacts on essential and wildlife habitat and impacts on wetlands, would all be undertaken in accordance with accepted development rights and are therefore anticipated by the legislation.

The only matter considered applicable for the purpose of determining and Environmental Offset is the Damage to Marine Plants.

5.5 Local Authority Assessment Benchmarks

This application is to be assessed against the Douglas Shire Planning Scheme 2018 The assessment benchmarks applicable under the Planning Scheme are addressed below.

Table 8 Planning Scheme Code Responses

Planning Scheme Codes	Applicability	Comment
Zone code		
Conservation Zone Code	Applies	Complies with applicable Assessment Benchmarks.
Rural Zone Code	Applies	Complies with applicable Assessment Benchmarks.
Overlay Codes		
Acid Sulfate Soils Overlay	Applies	Complies with applicable Assessment Benchmarks.
Coastal Environment Overlay	Applies	Complies with applicable Assessment Benchmarks.
Flood and Storm Tide Hazard Overlay	Applies	Complies with applicable Assessment Benchmarks.
Landscape Values Overlay	Not applicable	Not identified as applicable in the Tables of Assessment.
Natural Areas Overlay	Applies	Complies with applicable Assessment Benchmarks.
Place of Significance Overlay	Applies	Complies with applicable Assessment Benchmarks.
Transport Network Overlay	Applies	Complies with applicable Assessment Benchmarks.
Development Codes		
Environmental Performance Code	Applies	Complies or is able to comply with applicable Assessment Benchmarks.
Filling and Excavation Code	Applies	Complies or is able to comply with applicable Assessment Benchmarks.

Detailed Planning Scheme code response are provided at **Appendix N**.

6 CONCLUSION

RPS AAP Consulting Pty Ltd has been engaged by Douglas Shire Council (DSC) to seek Development Approval for the upgrade of the Daintree River Ferry. The upgrade works are to be commissioned under a Design & Construct contract, which has recently been tendered.

This development application seeks approval for:

- Development Permit for Operational Works (Prescribed Tidal Works, Marine Plant Disturbance, Interfering with Quarry Material above the High-water Mark);
- Development Permit for Operational Works (Civil Works for accessways, car parking and spoil disposal area);
- Development Permit for Material Change of Use for the undertaking of an Environmentally Relevant Activity (ERA16); and
- An Environmental Authority to undertake the ERA.

The site the subject of the application is the current Daintree River Ferry crossing and adjacent land located at Cape Tribulation Road, Lower Daintree QLD 4873, and described as Lot 2 RP865069, Lot 4 SP126928, Lot 1 RP804943 and Lot 359 SP215752. The site of the subject of the works includes an expanded Ferry Crossing across the Daintree River, the road reserve either side of the river and land above the highwater mark on the southern side of the Daintree River.

The existing Daintree Ferry has reached capacity with the increased patronage resulting in extended wait times and queues of up to several kilometres along Cape Tribulation Road. The proposed upgrades are intended to increase the carrying capacity of the Ferry operation, reduce wait times and improve highway safety.

The proposal involves:

- Upgrade of the existing ferry to a new 49 x 16m wide Ferry to accommodate additional demand, accommodating and additional 9 vehicles per trip;
- Upgrade of the existing ferry ramps to accommodate the larger ferry;
- An increase in the width of the area of the Daintree River that is dredged to accommodate the wider ferry;
- A new bunded dredge disposal area to the east of the southern ferry access to accommodate the dredge spoil;
- Upgrade and widening of the ferry access to 4-6 lanes and 150 metres long to accommodate the traffic entering and egressing the upgraded ferry;
- Additional car parking areas and pedestrian walkways
- Associated upgrades to the road network, including new priority lanes to allow improved access for residents, additional car parking and alternate routes to adjoining uses and new pedestrian footpaths linking the ferry terminal to the parking areas and information centres.

In accordance with the *Planning Regulation 2017,* Tidal Works and the material change of use for the ERA is Code Assessable and under the Douglas Shire Planning Scheme, the operational works is similarly identified as Code Assessable. As a Code Assessable application the referral agencies and the Council, as Assessment Manager, can only have regard to the applicable codes in the assessment of the application.

The assessment undertaken in this report demonstrates that the development is able to satisfy the relevant Assessment Benchmarks and, on that basis, the application is submitted for approval subject to reasonable and relevant conditions.

Appendix A

Development Application Forms

DA Form 1 – Development application details

Approved form (version 1.6 effective 2 August 2024) made under section 282 of the Planning Act 2016.

This form **must** be used to make a development application **involving code assessment or impact assessment**, except when applying for development involving only building work.

For a development application involving **building work only**, use *DA Form 2 – Building work details*.

For a development application involving **building work associated with any other type of assessable development (i.e. material change of use, operational work or reconfiguring a lot)**, use this form (*DA Form 1*) **and** parts 4 to 6 of *DA Form 2 – Building work details*.

Unless stated otherwise, all parts of this form **must** be completed in full and all required supporting information **must** accompany the development application.

One or more additional pages may be attached as a schedule to this development application if there is insufficient space on the form to include all the necessary information.

This form and any other form relevant to the development application must be used to make a development application relating to strategic port land and Brisbane core port land under the *Transport Infrastructure Act 1994*, and airport land under the *Airport Assets (Restructuring and Disposal) Act 2008.* For the purpose of assessing a development application relating to strategic port land and Brisbane core port land, any reference to a planning scheme is taken to mean a land use plan for the strategic port land, Brisbane port land use plan for Brisbane core port land, or a land use plan for airport land.

Note: *All terms used in this form have the meaning given under the Planning Act 2016, the Planning Regulation 2017, or the Development Assessment Rules (DA Rules).*

PART 1 – APPLICANT DETAILS

1) Applicant details	
Applicant name(s) (*individual or company full name*)	Douglas Shire Council
Contact name *(only applicable for companies)*	C/- RPS AAP Consulting Pty Ltd, Patrick Clifton
Postal address *(P.O. Box or street address)*	PO Box 1949
Suburb	Cairns
State	QLD
Postcode	4870
Country	Australia
Contact number	07 4031 1366
Email address *(non-mandatory)*	Patrick.clifton@rpsconsulting.com
Mobile number *(non-mandatory)*	
Fax number *(non-mandatory)*	
Applicant's reference number(s) *(if applicable)*	AU017394

1.1) Home-based business

☐ Personal details to remain private in accordance with section 264(6) of *Planning Act 2016*

2) Owner's consent

2.1) Is written consent of the owner required for this development application?

☒ Yes – the written consent of the owner(s) is attached to this development application
☐ No – proceed to 3)

PART 2 – LOCATION DETAILS

3) Location of the premises *(complete 3.1) or 3.2), and 3.3) as applicable)*

***Note**: Provide details below and attach a site plan for any or all premises part of the development application. For further information, see DA Forms Guide: Relevant plans.*

3.1) Street address and lot on plan

☒ Street address **AND** lot on plan (*all lots must be listed*), ***or***

☒ Street address **AND** lot on plan for an adjoining or adjacent property of the premises *(appropriate for development in water but adjoining or adjacent to land e.g. jetty, pontoon. All lots must be listed).*

a)	Unit No.	Street No.	Street Name and Type	Suburb
		362	Cape Tribulation Road	Lower Daintree
	Postcode	Lot No.	Plan Type and Number *(e.g. RP, SP)*	Local Government Area(s)
	4873	1	RP804943	Douglas Shire Council
b)	Unit No.	Street No.	Street Name and Type	Suburb
			Cape Tribulation Road	Lower Daintree
	Postcode	Lot No.	Plan Type and Number *(e.g. RP, SP)*	Local Government Area(s)
	4873	4	SP126928	Douglas Shire Council
c)	Unit No.	Street No.	Street Name and Type	Suburb
			Cape Tribulation Road	Lower Daintree
	Postcode	Lot No.	Plan Type and Number *(e.g. RP, SP)*	Local Government Area(s)
	4873	2	RP865069	Douglas Shire Council
d)	Unit No.	Street No.	Street Name and Type	Suburb
			Cape Tribulation Road	Lower Daintree
	Postcode	Lot No.	Plan Type and Number *(e.g. RP, SP)*	Local Government Area(s)
	4783	359	SP215752	Douglas Shire Council
e)	Unit No.	Street No.	Street Name and Type	Suburb
			Daintree River - Cape Tribulation Road	Lower Daintree
	Postcode	Lot No.	Plan Type and Number *(e.g. RP, SP)*	Local Government Area(s)
	4783	Adjacent 359	Adjacent SP215752	Douglas Shire Council

3.2) Coordinates of premises *(appropriate for development in remote areas, over part of a lot or in water not adjoining or adjacent to land e.g. channel dredging in Moreton Bay)*

***Note**: Place each set of coordinates in a separate row.*

☐ Coordinates of premises by longitude and latitude

Longitude(s)	Latitude(s)	Datum	Local Government Area(s) *(if applicable)*
		☐ WGS84 ☐ GDA94 ☐ Other:	

☐ Coordinates of premises by easting and northing

Easting(s)	Northing(s)	Zone Ref.	Datum	Local Government Area(s) *(if applicable)*
		☐ 54 ☐ 55 ☐ 56	☐ WGS84 ☐ GDA94 ☐ Other:	

3.3) Additional premises

☐ Additional premises are relevant to this development application and the details of these premises have been attached in a schedule to this development application

☐ Not required

4) Identify any of the following that apply to the premises and provide any relevant details	
☒ In or adjacent to a water body or watercourse or in or above an aquifer	
Name of water body, watercourse or aquifer:	Daintree River
☐ On strategic port land under the *Transport Infrastructure Act 1994*	
Lot on plan description of strategic port land:	
Name of port authority for the lot:	
☒ In a tidal area	
Name of local government for the tidal area *(if applicable)*:	Douglas Shire Council
Name of port authority for tidal area *(if applicable)*	Ports North (Cairns Port Authority)

☐ On airport land under the *Airport Assets (Restructuring and Disposal) Act 2008*	
Name of airport:	
☐ Listed on the Environmental Management Register (EMR) under the *Environmental Protection Act 1994*	
EMR site identification:	
☐ Listed on the Contaminated Land Register (CLR) under the *Environmental Protection Act 1994*	
CLR site identification:	

5) Are there any existing easements over the premises?

Note: Easement uses vary throughout Queensland and are to be identified correctly and accurately. For further information on easements and how they may affect the proposed development, see DA Forms Guide.

☐ Yes – All easement locations, types and dimensions are included in plans submitted with this development application

☒ No

PART 3 – DEVELOPMENT DETAILS

Section 1 – Aspects of development

6.1) Provide details about the first development aspect

a) What is the type of development? *(tick only one box)*

☒ Material change of use ☐ Reconfiguring a lot ☐ Operational work ☐ Building work

b) What is the approval type? *(tick only one box)*

☒ Development permit ☐ Preliminary approval ☐ Preliminary approval that includes a variation approval

c) What is the level of assessment?

☒ Code assessment ☐ Impact assessment *(requires public notification)*

d) Provide a brief description of the proposal *(e.g. 6 unit apartment building defined as multi-unit dwelling, reconfiguration of 1 lot into 3 lots)*:

ERA 16 – Extraction and Screening Activities

e) Relevant plans

***Note**: Relevant plans are required to be submitted for all aspects of this development application. For further information, see DA Forms guide: Relevant plans.*

☒ Relevant plans of the proposed development are attached to the development application

6.2) Provide details about the second development aspect

a) What is the type of development? *(tick only one box)*

☐ Material change of use ☐ Reconfiguring a lot ☒ Operational work ☐ Building work

b) What is the approval type? *(tick only one box)*

☒ Development permit ☐ Preliminary approval ☐ Preliminary approval that includes a variation approval

c) What is the level of assessment?

☒ Code assessment ☐ Impact assessment *(requires public notification)*

d) Provide a brief description of the proposal *(e.g. 6 unit apartment building defined as multi-unit dwelling, reconfiguration of 1 lot into 3 lots)*:

Prescribed Tidal Works and land based Operational Works (road and car park construction)

e) Relevant plans

***Note**: Relevant plans are required to be submitted for all aspects of this development application. For further information, see DA Forms Guide: Relevant plans.*

☒ Relevant plans of the proposed development are attached to the development application

6.3) Additional aspects of development
☐ Additional aspects of development are relevant to this development application and the details for these aspects that would be required under Part 3 Section 1 of this form have been attached to this development application
☒ Not required
6.4) Is the application for State facilitated development?
☐ Yes - Has a notice of declaration been given by the Minister?
☒ No

Section 2 – Further development details

7) Does the proposed development application involve any of the following?	
Material change of use	☒ Yes – complete division 1 if assessable against a local planning instrument
Reconfiguring a lot	☐ Yes – complete division 2
Operational work	☒ Yes – complete division 3
Building work	☐ Yes – complete *DA Form 2 – Building work details*

Division 1 – Material change of use

***Note**: This division is only required to be completed if any part of the development application involves a material change of use assessable against a local planning instrument.*

8.1) Describe the proposed material change of use			
Provide a general description of the proposed use	Provide the planning scheme definition *(include each definition in a new row)*	Number of dwelling units *(if applicable)*	Gross floor area (m^2) *(if applicable)*
Maintenance Dredging	ERA 16 – Extraction and Screening Activities	n/a	n/a

8.2) Does the proposed use involve the use of existing buildings on the premises?
☐ Yes
☒ No

8.3) Does the proposed development relate to temporary accepted development under the Planning Regulation?	
☐ Yes – provide details below or include details in a schedule to this development application	
☒ No	
Provide a general description of the temporary accepted development	Specify the stated period dates under the Planning Regulation

Division 2 – Reconfiguring a lot

***Note**: This division is only required to be completed if any part of the development application involves reconfiguring a lot.*

9.1) What is the total number of existing lots making up the premises?

9.2) What is the nature of the lot reconfiguration? *(tick all applicable boxes)*	
☐ Subdivision *(complete 10)*	☐ Dividing land into parts by agreement *(complete 11)*
☐ Boundary realignment *(complete 12)*	☐ Creating or changing an easement giving access to a lot from a constructed road *(complete 13)*

10) Subdivision				
10.1) For this development, how many lots are being created and what is the intended use of those lots:				
Intended use of lots created	Residential	Commercial	Industrial	Other, please specify:
Number of lots created				

10.2) Will the subdivision be staged?	
☐ Yes – provide additional details below ☐ No	
How many stages will the works include?	
What stage(s) will this development application apply to?	

11) Dividing land into parts by agreement – how many parts are being created and what is the intended use of the parts?				
Intended use of parts created	Residential	Commercial	Industrial	Other, please specify:
Number of parts created				

12) Boundary realignment			
12.1) What are the current and proposed areas for each lot comprising the premises?			
Current lot		Proposed lot	
Lot on plan description	Area (m^2)	Lot on plan description	Area (m^2)
12.2) What is the reason for the boundary realignment?			

13) What are the dimensions and nature of any existing easements being changed and/or any proposed easement? *(attach schedule if there are more than two easements)*				
Existing or proposed?	Width (m)	Length (m)	Purpose of the easement? *(e.g. pedestrian access)*	Identify the land/lot(s) benefitted by the easement

Division 3 – Operational work

***Note**: This division is only required to be completed if any part of the development application involves operational work.*

14.1) What is the nature of the operational work?		
☒ Road work	☒ Stormwater	☐ Water infrastructure
☒ Drainage work	☒ Earthworks	☐ Sewage infrastructure
☐ Landscaping	☐ Signage	☒ Clearing vegetation
☒ Other – please specify:	Prescribed Tidal Works	

14.2) Is the operational work necessary to facilitate the creation of new lots? *(e.g. subdivision)*	
☐ Yes – specify number of new lots:	
☒ No	

14.3) What is the monetary value of the proposed operational work? *(include GST, materials and labour)*

$TBC

PART 4 – ASSESSMENT MANAGER DETAILS

15) Identify the assessment manager(s) who will be assessing this development application

Douglas Shire Council

16) Has the local government agreed to apply a superseded planning scheme for this development application?

☐ Yes – a copy of the decision notice is attached to this development application
☐ The local government is taken to have agreed to the superseded planning scheme request – relevant documents attached
☒ No

PART 5 – REFERRAL DETAILS

17) Does this development application include any aspects that have any referral requirements?
***Note**: A development application will require referral if prescribed by the* Planning Regulation 2017.

☐ No, there are no referral requirements relevant to any development aspects identified in this development application – proceed to Part 6

Matters requiring referral to the **Chief Executive of the *Planning Act 2016***:

☐ Clearing native vegetation
☐ Contaminated land *(unexploded ordnance)*
☒ Environmentally relevant activities (ERA) *(only if the ERA has not been devolved to a local government)*
☐ Fisheries – aquaculture
☐ Fisheries – declared fish habitat area
☒ Fisheries – marine plants
☐ Fisheries – waterway barrier works
☐ Hazardous chemical facilities
☐ Heritage places – Queensland heritage place *(on or near a Queensland heritage place)*
☐ Infrastructure-related referrals – designated premises
☐ Infrastructure-related referrals – state transport infrastructure
☐ Infrastructure-related referrals – State transport corridor and future State transport corridor
☐ Infrastructure-related referrals – State-controlled transport tunnels and future state-controlled transport tunnels
☐ Infrastructure-related referrals – near a state-controlled road intersection
☐ Koala habitat in SEQ region – interfering with koala habitat in koala habitat areas outside koala priority areas
☐ Koala habitat in SEQ region – key resource areas
☐ Ports – Brisbane core port land – near a State transport corridor or future State transport corridor
☐ Ports – Brisbane core port land – environmentally relevant activity (ERA)
☐ Ports – Brisbane core port land – tidal works or work in a coastal management district
☐ Ports – Brisbane core port land – hazardous chemical facility
☐ Ports – Brisbane core port land – taking or interfering with water
☐ Ports – Brisbane core port land – referable dams
☐ Ports – Brisbane core port land – fisheries
☐ Ports – Land within Port of Brisbane's port limits *(below high-water mark)*
☐ SEQ development area
☐ SEQ regional landscape and rural production area or SEQ rural living area – tourist activity or sport and recreation activity
☐ SEQ regional landscape and rural production area or SEQ rural living area – community activity
☐ SEQ regional landscape and rural production area or SEQ rural living area – indoor recreation
☐ SEQ regional landscape and rural production area or SEQ rural living area – urban activity
☐ SEQ regional landscape and rural production area or SEQ rural living area – combined use
☐ SEQ northern inter-urban break – tourist activity or sport and recreation activity

☐ SEQ northern inter-urban break – community activity
☐ SEQ northern inter-urban break – indoor recreation
☐ SEQ northern inter-urban break – urban activity
☐ SEQ northern inter-urban break – combined use
☒ Tidal works or works in a coastal management district
☐ Reconfiguring a lot in a coastal management district or for a canal
☐ Erosion prone area in a coastal management district
☐ Urban design
☐ Water-related development – taking or interfering with water
☐ Water-related development – removing quarry material *(from a watercourse or lake)*
☐ Water-related development – referable dams
☐ Water-related development –levees *(category 3 levees only)*
☐ Wetland protection area

Matters requiring referral to the **local government:**

☐ Airport land
☐ Environmentally relevant activities (ERA) (*only if the ERA has been devolved to local government)*
☐ Heritage places – Local heritage places

Matters requiring referral to the **Chief Executive of the distribution entity or transmission entity:**

☐ Infrastructure-related referrals – Electricity infrastructure

Matters requiring referral to:

- The **Chief Executive of the holder of the licence**, if not an individual
- The **holder of the licence**, if the holder of the licence is an individual

☐ Infrastructure-related referrals – Oil and gas infrastructure

Matters requiring referral to the **Brisbane City Council:**

☐ Ports – Brisbane core port land

Matters requiring referral to the **Minister responsible for administering the *Transport Infrastructure Act 1994*:**

☐ Ports – Brisbane core port land *(where inconsistent with the Brisbane port LUP for transport reasons)*
☐ Ports – Strategic port land

Matters requiring referral to the **relevant port operator**, if applicant is not port operator**:**

☐ Ports – Land within Port of Brisbane's port limits *(below high-water mark)*

Matters requiring referral to the **Chief Executive of the relevant port authority:**

☐ Ports – Land within limits of another port *(below high-water mark)*

Matters requiring referral to the **Gold Coast Waterways Authority:**

☐ Tidal works or work in a coastal management district *(in Gold Coast waters)*

Matters requiring referral to the **Queensland Fire and Emergency Service:**

☐ Tidal works or work in a coastal management district *(involving a marina (more than six vessel berths))*

18) Has any referral agency provided a referral response for this development application?

☐ Yes – referral response(s) received and listed below are attached to this development application
☒ No

Referral requirement	Referral agency	Date of referral response

Identify and describe any changes made to the proposed development application that was the subject of the referral response and this development application, or include details in a schedule to this development application *(if applicable).*

PART 6 – INFORMATION REQUEST

19) Information request under the DA Rules

☒ I agree to receive an information request if determined necessary for this development application

☐ I do not agree to accept an information request for this development application

***Note**: By not agreeing to accept an information request I, the applicant, acknowledge:*

- *that this development application will be assessed and decided based on the information provided when making this development application and the assessment manager and any referral agencies relevant to the development application are not obligated under the DA Rules to accept any additional information provided by the applicant for the development application unless agreed to by the relevant parties*
- *Part 3 under Chapter 1 of the DA Rules will still apply if the application is an application listed under section 11.3 of the DA Rules or*
- *Part 2under Chapter 2 of the DA Rules will still apply if the application is for state facilitated development*

Further advice about information requests is contained in the DA Forms Guide.

PART 7 – FURTHER DETAILS

20) Are there any associated development applications or current approvals? *(e.g. a preliminary approval)*

☐ Yes – provide details below or include details in a schedule to this development application

☒ No

List of approval/development application references	Reference number	Date	Assessment manager
☐ Approval ☐ Development application			
☐ Approval ☐ Development application			

21) Has the portable long service leave levy been paid? *(only applicable to development applications involving building work or operational work)*

☐ Yes – a copy of the receipted QLeave form is attached to this development application

☒ No – I, the applicant will provide evidence that the portable long service leave levy has been paid before the assessment manager decides the development application. I acknowledge that the assessment manager may give a development approval only if I provide evidence that the portable long service leave levy has been paid

☐ Not applicable *(e.g. building and construction work is less than $150,000 excluding GST)*

Amount paid	Date paid (dd/mm/yy)	QLeave levy number (A, B or E)
$		

22) Is this development application in response to a show cause notice or required as a result of an enforcement notice?

☐ Yes – show cause or enforcement notice is attached

☒ No

23) Further legislative requirements

Environmentally relevant activities

23.1) Is this development application also taken to be an application for an environmental authority for an **Environmentally Relevant Activity (ERA)** under section 115 of the *Environmental Protection Act 1994*?

☒ Yes – the required attachment (form ESR/2015/1791) for an application for an environmental authority accompanies this development application, and details are provided in the table below

☐ No

***Note**: Application for an environmental authority can be found by searching "ESR/2015/1791" as a search term at www.qld.gov.au. An ERA requires an environmental authority to operate. See www.business.qld.gov.au for further information.*

Proposed ERA number:	16	Proposed ERA threshold:	1,000 to 10,000t per annum
Proposed ERA name:	Extractive and screening activities		

☐ Multiple ERAs are applicable to this development application and the details have been attached in a schedule to this development application.

Hazardous chemical facilities

23.2) Is this development application for a **hazardous chemical facility**?

☐ Yes – *Form 536: Notification of a facility exceeding 10% of schedule 15 threshold* is attached to this development application

☒ No

***Note**: See www.business.qld.gov.au for further information about hazardous chemical notifications.*

Clearing native vegetation

23.3) Does this development application involve **clearing native vegetation** that requires written confirmation that the chief executive of the *Vegetation Management Act 1999* is satisfied the clearing is for a relevant purpose under section 22A of the *Vegetation Management Act 1999*?

☐ Yes – this development application includes written confirmation from the chief executive of the *Vegetation Management Act 1999* (s22A determination)

☒ No

***Note**: 1. Where a development application for operational work or material change of use requires a s22A determination and this is not included, the development application is prohibited development.*

2. See https://www.qld.gov.au/environment/land/vegetation/applying for further information on how to obtain a s22A determination.

Environmental offsets

23.4) Is this development application taken to be a prescribed activity that may have a significant residual impact on a **prescribed environmental matter** under the *Environmental Offsets Act 2014*?

☒ Yes – I acknowledge that an environmental offset must be provided for any prescribed activity assessed as having a significant residual impact on a prescribed environmental matter

☐ No

***Note**: The environmental offset section of the Queensland Government's website can be accessed at www.qld.gov.au for further information on environmental offsets.*

Koala habitat in SEQ Region

23.5) Does this development application involve a material change of use, reconfiguring a lot or operational work which is assessable development under Schedule 10, Part 10 of the Planning Regulation 2017?

☐ Yes – the development application involves premises in the koala habitat area in the koala priority area

☐ Yes – the development application involves premises in the koala habitat area outside the koala priority area

☒ No

***Note**: If a koala habitat area determination has been obtained for this premises and is current over the land, it should be provided as part of this development application. See koala habitat area guidance materials at www.desi.qld.gov.au for further information.*

Water resources

23.6) Does this development application involve **taking or interfering with underground water through an artesian or subartesian bore, taking or interfering with water in a watercourse, lake or spring, or taking overland flow water under the *Water Act 2000***?

☐ Yes – the relevant template is completed and attached to this development application and I acknowledge that a relevant authorisation or licence under the *Water Act 2000* may be required prior to commencing development

☒ No

***Note**: Contact the Department of Resources at www.resources.qld.gov.au for further information.*

DA templates are available from planning.statedevelopment.qld.gov.au. If the development application involves:

- *Taking or interfering with underground water through an artesian or subartesian bore: complete DA Form 1 Template 1*
- *Taking or interfering with water in a watercourse, lake or spring: complete DA Form1 Template 2*
- *Taking overland flow water: complete DA Form 1 Template 3.*

Waterway barrier works

23.7) Does this application involve **waterway barrier works?**

☐ Yes – the relevant template is completed and attached to this development application

☒ No

DA templates are available from planning.statedevelopment.qld.gov.au. For a development application involving waterway barrier works, complete DA Form 1 Template 4.

Marine activities

23.8) Does this development application involve **aquaculture, works within a declared fish habitat area or removal, disturbance or destruction of marine plants?**

☒ Yes – an associated *resource* allocation authority is attached to this development application, if required under the *Fisheries Act 1994*

☐ No

***Note**: See guidance materials at www.daf.qld.gov.au for further information.*

Quarry materials from a watercourse or lake

23.9) Does this development application involve the **removal of quarry materials from a watercourse or lake** under the *Water Act 2000?*

☐ Yes – I acknowledge that a quarry material allocation notice must be obtained prior to commencing development

☒ No

***Note**: Contact the Department of Resources at www.resources.qld.gov.au and www.business.qld.gov.au for further information.*

Quarry materials from land under tidal waters

23.10) Does this development application involve the **removal of quarry materials from land under tidal water** under the *Coastal Protection and Management Act 1995?*

☐ Yes – I acknowledge that a quarry material allocation notice must be obtained prior to commencing development

☒ No

***Note**: Contact the Department of Environment, Science and Innovation at www.desi.qld.gov.au for further information.*

Referable dams

23.11) Does this development application involve a **referable dam** required to be failure impact assessed under section 343 of the *Water Supply (Safety and Reliability) Act 2008* (the Water Supply Act)?

☐ Yes – the 'Notice Accepting a Failure Impact Assessment' from the chief executive administering the Water Supply Act is attached to this development application

☒ No

***Note**: See guidance materials at www.resources.qld.gov.au for further information.*

Tidal work or development within a coastal management district

23.12) Does this development application involve **tidal work or development in a coastal management district**?

☒ Yes – the following is included with this development application:
- ☒ Evidence the proposal meets the code for assessable development that is prescribed tidal work *(only required if application involves prescribed tidal work)*
- ☒ A certificate of title

☐ No

***Note**: See guidance materials at www.desi.qld.gov.au for further information.*

Queensland and local heritage places

23.13) Does this development application propose development on or adjoining a place entered in the **Queensland heritage register** or on a place entered in a local government's **Local Heritage Register**?

☐ Yes – details of the heritage place are provided in the table below

☒ No

***Note**: See guidance materials at www.desi.qld.gov.au for information requirements regarding development of Queensland heritage places.*

For a heritage place that has cultural heritage significance as a local heritage place and a Queensland heritage place, provisions are in place under the Planning Act 2016 that limit a local categorising instrument from including an assessment benchmark about the effect or impact of, development on the stated cultural heritage significance of that place. See guidance materials at www.planning.statedevelopment.qldgov.au for information regarding assessment of Queensland heritage places.

Name of the heritage place:		Place ID:	

Decision under section 62 of the *Transport Infrastructure Act 1994*

23.14) Does this development application involve new or changed access to a state-controlled road?

☐ Yes – this application will be taken to be an application for a decision under section 62 of the *Transport Infrastructure Act 1994* (subject to the conditions in section 75 of the *Transport Infrastructure Act 1994* being satisfied)

☒ No

Walkable neighbourhoods assessment benchmarks under Schedule 12A of the Planning Regulation

23.15) Does this development application involve reconfiguring a lot into 2 or more lots in certain residential zones (except rural residential zones), where at least one road is created or extended?

☒ Yes – Schedule 12A is applicable to the development application and the assessment benchmarks contained in schedule 12A have been considered

☐ No

***Note**: See guidance materials at www.planning.statedevelopment.qld.gov.au for further information.*

PART 8 – CHECKLIST AND APPLICANT DECLARATION

24) Development application checklist

I have identified the assessment manager in question 15 and all relevant referral requirement(s) in question 17 ***Note**: See the Planning Regulation 2017 for referral requirements*	☒ Yes
If building work is associated with the proposed development, Parts 4 to 6 of *DA Form 2 – Building work details* have been completed and attached to this development application	☐ Yes ☒ Not applicable
Supporting information addressing any applicable assessment benchmarks is with the development application ***Note**: This is a mandatory requirement and includes any relevant templates under question 23, a planning report and any technical reports required by the relevant categorising instruments (e.g. local government planning schemes, State Planning Policy, State Development Assessment Provisions). For further information, see DA Forms Guide: Planning Report Template.*	☒ Yes
Relevant plans of the development are attached to this development application ***Note**: Relevant plans are required to be submitted for all aspects of this development application. For further information, see DA Forms Guide: Relevant plans.*	☒ Yes
The portable long service leave levy for QLeave has been paid, or will be paid before a development permit is issued *(see 21)*	☒ Yes ☐ Not applicable

25) Applicant declaration
☒ By making this development application, I declare that all information in this development application is true and correct ☒ Where an email address is provided in Part 1 of this form, I consent to receive future electronic communications from the assessment manager and any referral agency for the development application where written information is required or permitted pursuant to sections 11 and 12 of the *Electronic Transactions Act 2001* ***Note**: It is unlawful to intentionally provide false or misleading information.*
Privacy – Personal information collected in this form will be used by the assessment manager and/or chosen assessment manager, any relevant referral agency and/or building certifier (including any professional advisers which may be engaged by those entities) while processing, assessing and deciding the development application. All information relating to this development application may be available for inspection and purchase, and/or published on the assessment manager's and/or referral agency's website. Personal information will not be disclosed for a purpose unrelated to the *Planning Act 2016*, Planning Regulation 2017 and the DA Rules except where: • such disclosure is in accordance with the provisions about public access to documents contained in the *Planning Act 2016* and the Planning Regulation 2017, and the access rules made under the *Planning Act 2016* and Planning Regulation 2017; or • required by other legislation (including the *Right to Information Act 2009*); or • otherwise required by law. This information may be stored in relevant databases. The information collected will be retained as required by the *Public Records Act 2002.*

PART 9 – FOR COMPLETION OF THE ASSESSMENT MANAGER – FOR OFFICE USE ONLY

Date received: | Reference number(s):

Notification of engagement of alternative assessment manager	
Prescribed assessment manager	
Name of chosen assessment manager	
Date chosen assessment manager engaged	
Contact number of chosen assessment manager	
Relevant licence number(s) of chosen assessment manager	

QLeave notification and payment *Note: For completion by assessment manager if applicable*			
Description of the work			
QLeave project number			
Amount paid ($)		Date paid (dd/mm/yy)	
Date receipted form sighted by assessment manager			
Name of officer who sighted the form			

Application form

Environmental Protection Act 1994

Development application Form 1 - Application details - attachment for an application for an environmental authority

This form is to be attached to the Development application Form 1 - Application details when making a development application for prescribed environmentally relevant activities (ERAs). Under section 115 of the Environmental Protection Act 1994 (EP Act) the development approval (DA) application is taken to be an application for an environmental authority (EA) for the prescribed ERAs.

It is recommended that prior to making an application for an environmentally relevant activity (ERA), you read the information on what to provide with an application. This information is located on the Business Queensland website at www.business.qld.gov.au (use the search term "Environmental licence"). This website also has a diagnostic tool called the "forms and fees finder" which will help identify any fees and supporting information you need to make an application.

Important notes:

- ☑ The application can't be to dredge or extract more than 10,000 tonnes of material a year in the North Stradbroke Island region. This is prohibited development under the Planning Regulation 2017.
- ☑ All applicants must be registered as suitable operators[1]. A suitable operator is a person or a corporation assessed under section 318I of the EP Act as being suitable to carry out an ERA and is listed on the suitable operator register[2].
- ☑ If more than one ERA is being applied for, the ERAs must be carried out as part of a single integrated operation. ERAs are carried out as a single integrated operation if::
  - the ERAs will be carried out under the day to day management of a single responsible individual (e.g. a site manager or operations manager); and
  - all of the ERAs are operationally interrelated, that is, the operation cannot function without all of the ERAs. Separate applications will need to be made for the ERAs that cannot be carried out as a single integrated operation; and
  - the ERA/s are, or will be, carried out at one or more places; and
  - the places where the ERAs will be carried out are close enough to make the integrated day to day management of the activities feasible.
- ☑ All the ERAs that will be on the EA must be prescribed ERAs. Prescribed ERAs are ERAs listed in schedule 2 of the Environmental Protection Regulation 2019.

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[1] Your EA application must be refused if you are not a registered suitable operator when the application is decided. To become a registered suitable operator, apply using the form "Application to be a registered suitable operator - ESR/2015/1771" (available at www.qld.gov.au, using the publication number ESR/2015/1771 as a search term).

[2] The register is available on the Queensland Government website at www.qld.gov.au, using the search term "suitable operator register".

Queensland Government

Privacy statement

Where ERAs are administered by the Queensland Government:

The Department of the Environment, Tourism, Science and Innovation and Department of Primary Industries are collecting the information on this form to process your application for an EA. The collection is authorised under Chapter 5 of the EP Act.

Please note that the administering authority is required to keep this application on a register of documents open for inspection by members of the public under section 540 of the EP Act, and must permit a person to take extracts from the register pursuant to section 542 of the EP Act. Your personal information will not be otherwise disclosed to any other parties unless authorised or required by law. For queries about privacy matters please email privacy@detsi@detsi.qld.gov.au or telephone: 13 74 68.

Where ERAs are administered by a local government:

Contact the local government for their privacy information.

Pre-lodgement meeting

Where ERAs are administered by the Queensland Government:

You can arrange a pre-lodgement meeting through the Department of State Development, Infrastructure and Planning prior to lodging this application if you have not already done so. For more information contact the Department of State Development, Infrastructure and Planning (for contact details go to https://www.planning.qld.gov.au/contact-us).

Where ERAs are administered by a local government:

Contact the local government about pre-lodgement meetings.

The fields marked with an asterisk * are mandatory, if they are not completed then your application may be considered not properly made under the *Planning Act 2016*.

1 Applicant details

To nominate a site or application contact for this application please provide details at Questions 14 and 15.

Is there more than one applicant? *	☒ No—provide applicant's details below. ☐ Yes—provide the principal applicant's details below and all other applicants' details in Attachment 1—*"Joint applicants and appointment of principal applicant"*

Name - individual or contact person if applicant is a organisation* Robert Latham	Suitable Operator Reference Number* 160452
Organisation name, including any trading name (*if an organisation) Douglas Shire Council	ABN/ACN (*if an organisation) 71 241 237 800
Residential or registered business address (not a post office box)* 64-66 Front Street Mossman QLD 4873	Phone* 07 40999444
Postal address (if same as above, write "AS ABOVE")* PO Box 723 Mossman QLD 4873	Facsimile
Email* enquiries@douglas.qld.gov.au	☐ Indicate if you want to receive correspondence via email

1.1 Nomination of an agent for this application

I/we nominate the below agent to act on my/our behalf and to receive correspondence relating to this application.

Do you want to nominate an agent for this application?* ☐ No → Go to *Question 2* ☒ Yes → Complete the agent's details here.	
Name of agent – individual or contact person if agent is an organisation Patrick Clifton	
Organisation name, including trading name if an organisation RPS AAP Consulting Pty Ltd	ABN/ACN (if an organisation)
Postal address PO Box 1949 Cairns QLD 4870	Phone 0740311336
Email patrick.clifton@rpsconsulting.com	☐ Indicate if you do not want to receive correspondence via email

2 Details of the ERA(s) that you want to operate

Please list all of the ERAs that will be undertaken on site, including:

- Any existing ERAs will continue to operate unchanged on the site (select “Existing” in the table below);
- ERAs that are proposed to be undertaken on the site as part of the application (select “New - DA” in the table below); and
- ERAs that are proposed to be undertaken on this site, that don’t form part of this application as they do not require a DA (select “New - EA” in the table below).

Listing all the ERAs that will be undertaken on site will help enable them to all be included on the one EA

If the ERA has eligibility criteria and standard conditions[3], identify whether you can comply with them. Select “N/A” where there are no eligibility criteria and standard conditions for that ERA. If you cannot comply with all of the applicable standard conditions, select “no” and attach details of the standard conditions you cannot comply with.

[3] ERAs with eligibility criteria and standard conditions are listed at: www.business.qld.gov.au (use the search term “eligibility criteria”).

ERA number*	Threshold*	Name of ERA*	New or existing ERA(s)	I can comply with the eligibility criteria*	I can comply with all the standard conditions*
16	1,000	Extractive and Screen Activities	☒ New - DA ☒ New - EA ☐ Existing	☒ Yes ☐ N/A	☒ Yes ☐ No
			☐ New - DA ☐ New - EA ☐ Existing	☐ Yes ☐ N/A	☐ Yes ☐ No
			☐ New - DA ☐ New - EA ☐ Existing	☐ Yes ☐ N/A	☐ Yes ☐ No
			☐ New - DA ☐ New - EA ☐ Existing	☐ Yes ☐ N/A	☐ Yes ☐ No
			☐ New - DA ☐ New - EA ☐ Existing	☐ Yes ☐ N/A	☐ Yes ☐ No
			☐ New - DA ☐ New - EA ☐ Existing	☐ Yes ☐ N/A	☐ Yes ☐ No
			☐ New - DA ☐ New - EA ☐ Existing	☐ Yes ☐ N/A	☐ Yes ☐ No
			☐ New - DA ☐ New - EA ☐ Existing	☐ Yes ☐ N/A	☐ Yes ☐ No
			☐ New - DA ☐ New - EA ☐ Existing	☐ Yes ☐ N/A	☐ Yes ☐ No
			☐ New - DA ☐ New - EA ☐ Existing	☐ Yes ☐ N/A	☐ Yes ☐ No

☐ The EA number for existing ERA(s) listed above is

If there are new ERAs and your existing EA is an amalgamated EA, the application for ERAs associated with the DA application will create a new EA for the new ERAs. An application to amalgamate the current and new EAs may then be required.

☐ I have attached details of the standard conditions that I cannot comply with.

3 Will the ERAs be carried out as a single integrated operation?

Will more than one ERA be operated at the location?*		
☒ No	Go to *Question 4.*	
☐ Yes	Will any of the ERAs be operated as a single integrated operation (see definition on page one)?*	
	☐ No	Go to *Question 4.*
	☐ Yes	Provide details of the ERAs that are operated as a single integrated operation and supporting information showing they are a single integrated operation then go to *Question 4.*

4 Description of land where the ERA/s will be carried out

Where activities will be undertaken at more than one location, provide details in Attachment 2.

Number*	Street Name*	Suburb/Town*	Postcode*
362	Cape Tribulation Road	Lower Daintree	4873
Real Property Description*		Specific area within the location ie GPS or other descriptor*	
Lot 1 Plan RP804943		Daintree River	
Port (*if applicable)		Project Name (*if applicable)	
		Daintree River Ferry Upgrade	

5 Details of contaminated land

Is there a site management plan in effect for contaminated land that relates to the land that is the subject of this application?*		
☒ No	Go to *Question 6.*	
☐ Yes	Description of land*	
	Lot and plan number(s)	Local Government Area*
	Lot Plan Lot Plan Lot Plan Lot Plan	

6 Environmental offsets

An environmental offset, under the *Environmental Offsets Act 2014*, may be required for an ERA where, despite all reasonable measures to avoid and minimise impacts on certain environmental matters, there is still likely to be significant residual impact on one or more of those matters.

You must verify the presence, whether temporary or permanent, of those environmental matters. For more information refer to the Queensland Environmental Offsets Policy and the Significant Residual Impact Guideline at the Queensland Government website at www.qld.gov.au, using the search term “environmental offsets”.

Will the ERA(s) being applied for result in a significant residual impact to a matter of State environmental significance (MSES)?*	
☒ No	Go to *Question 7*.
☐ Yes	You **must** attach supporting information that: 1. Details the magnitude and duration of the likely significant residual impact on each prescribed environmental matter (other than matters of local environmental significance) for the entire activity; and 2. Demonstrates that all reasonable measures to avoid and minimise impacts on each of those matters will be undertaken.

6.1 Notice of election

Has a notice of election been submitted to the administering authority, or is being submitted as part of this application?	
☐ No	Go to *Question 6.2*.
☐ Yes	☐ You can attach the notice of election, if it has not been submitted to the department. Go to *Question 6.3*.

6.2 Staged environmental offsets

Offset delivery can be staged, however for this to occur, the condition of any approved environmental authority needs to state that both the activity and the offset may be staged. As part of your notice of election for each stage under the *Environmental Offsets Act 2014*, you are required to provide a detailed assessment of the quantum of impact of that stage and the offset obligation requirement to be delivered for that stage.

Will the proposed ERA(s) and delivery of an environmental offset be undertaken in stages?	
☐ No	Go to *Question 6.3*
☐ Yes	You **must** attach supporting information that details of how the activity/activities are proposed to be staged.

6.3 Nature conservation environmental offset

Has another authority issued under the *Nature Conservation Act 1992* required an environmental offset for the same, or substantially the same, impact and the same, or substantially the same, MSES?	
☐ No	Go to *Question 6.4*
☐ Yes	Provide permit number:

6.4 Marine parks environmental offset

Has marine park permit issued under the *Marine Parks Act 2004* required an environmental offset for the same, or substantially the same, impact and the same, or substantially the same, MSES?	
☐ No	Go to *Question 7*
☐ Yes	☐ You **must** attach a copy of the marine park permit to this application.

7 Matters of national environmental significance

There are currently nine matters of national environmental significance (MNES) which have been defined in the *Environment Protection and Biodiversity Conservation Act 1999 (Cth)* (EPBC Act). These are:

- world heritage properties
- national heritage places
- wetlands of international importance (listed under the Ramsar Convention)
- listed threatened species and ecological communities
- migratory species protected under international agreements
- Commonwealth marine areas
- the Great Barrier Reef Marine Park
- nuclear actions (including uranium mines)
- a water resource, in relation to coal seam gas development and large coal mining development

To determine whether the proposed ERA(s) will have a significant impact on MNES and for referral requirements, please refer to the guidance provided by the Federal Government's Department of Environment on **www.environment.gov.au**.

Would the carrying out of the proposed ERA(s) be likely to have a significant impact on a MNES?*	
☒ No	Go to *Question 9*.
☐ Yes	Has the proposal been referred to the Federal Department of Environment for formal assessment and approval? ☐ No → Go to *Question 8*. ☐ Yes → Go to *Question 7.1*.

7.1 EPBC Act approval for environmental offsets

Has an approval issued under the EPBC Act required an environmental offset for the same, or substantially the same, impact and the same, or substantially the same, MSES?	
☒ No	Go to *Question 8*.
☐ Yes	I have attached a copy of the approval under the EPBC Act.
	Are there any MNES which were assessed under the EPBC Act which are the same, or substantially the same as an MSES, but that were not conditioned in the approval? ☐ No → Go to Question *8* ☐ Yes → List these MNES:

8 Environmental impact statement under the State Development and Public Works Organisation Act 1971

Certain stages of the EA application process may not apply if the proposed activities were assessed as part of a coordinated project declared under the *State Development and Public Works Organisation Act 1971* (State Development Act), you are only required to answer Questions 8 to 8.1 if you have a current Co-ordinator General's (CG's) evaluation report for the project.

Has an environmental impact statement (EIS) process under State Development Act been completed?*	
☒ No	Go to *Question 9*.
☐ Yes	What is the title and project name of the completed EIS?*

	☐ The EIS was **completed for all activities** that are the subject of this application.	
		☐ The environmental risks or the way the activity/activities are proposed to be carried out **have not changed** since the EIS was completed.
		☐ The environmental risks or the way the activity/activities are proposed to be carried out **have changed** since the EIS was completed.
	☐ The EIS was **not completed for all activities** that are the subject of this application.	
		☐ The environmental risks or the way the activity/activities are proposed to be carried out **have not changed** since the EIS was completed.
		☐ The environmental risks or the way the activity/activities are proposed to be carried out **have changed** since the EIS was completed.
	Was the EIS completed for all activities that are the subject of this application?*	
	☐ No	Please list the activities that were not included in the EIS or attach documentation with this information to this application: ☐ I have attached the required supporting information.
	☐ Yes	

8.1 Coordinator-General's conditions

Are there CG's conditions that relate to the ERA(s) being applied for?*	
☐ No →	Go to *Question 9*.
☐ Yes →	Name of the CG's evaluation report:

9 Assessment of the environmental impact

This question is **not applicable if** an EIS process under the State Development Act has been completed for all the ERA(s) that are the subject of this application and the environmental risks of the activities **and** the way they are proposed to be carried out has not changed since the EIS was completed.

You must attach to this application an assessment of the likely impact of each new ERA (whether from the DA application or another new ERA you want included on the EA that does not require a DA) on environmental values (*if applicable), including:

- a description of the environmental values likely to be affected by each relevant activity
- details of any emissions or releases likely to be generated by each relevant activity
- a description of the risk and likely magnitude of impacts on the environmental values
- details of the management practices proposed to be implemented to prevent or minimise adverse impacts
- details of how the land the subject of the application will be rehabilitated after each relevant activity ceases

☒ I have attached an assessment of the environmental impact and specific supporting information.

10 Details of waste management

Describe the proposed measures for minimising and managing waste generated by the activity/ies below *
See attached Environmental Management Plan

☒ I have attached the proposed measures.

11 Take effect date (when fees will commence being charged)

You may nominate when the EA will take effect should it be approved. The date the environmental authority takes effect will be the date from which you can commence the activities as well as the date your annual fees will commence to be charged (your anniversary date). Under section 200 of the EP Act, if a development permit for a material change of use under the *Planning Act 2016* or a State development area (SDA) approval is required in order to carry out the ERA, the EA cannot take effect until the development permit or SDA approval takes effect (known as taking effect pending development approval).

Note that where you are applying new ERAs, and your existing EA is an amalgamated EA, the application for ERAs associated with the DA application will create a new EA for the new ERAs. In this case you may wish to nominate a take effect date in the future which, post approval of this application, will provide you with enough time to amalgamate your current and new EAs. Amalgamating your EAs prior to the take effect date of your new EA will prevent you being required to pay the first annual fee for your new EA.

Do you want the EA to take effect on the decision date, nominated date, or pending development approval?*	
☒ Decision date	The take effect date will be the date of the decision.
☐ Nominated date	Details of nominated take effect date:

12 Nomination of site contact

An alternative contact nominated by the legal person which holds, or will in future hold, a relevant authority issued by the department. The department may direct correspondence relating to actual or potential compliance matters to the site contact.

Do you want to nominate a site contact?*			☒ No ☐ Yes, provide details below
Title*	First Name*	Surname*	
Email Address*			☐ Indicate if you want to receive correspondence via email
Phone			

13 Nomination of application contact

An alternative contact nominated by the legal person which has submitted, or will in future submit, applications to be assessed by the department. All departmental correspondence relating to the assessment of applications will be directed to the application contact, however, if the application results in the issuing of a relevant authority, the relevant authority will be sent to the applicant.

Name or Position*
Patrick Clifton, Senior Principal Planner RPS
Primary Phone*
07 40311336
Secondary Phone
Email Address*
patrick.clifton@rpsconsulting.com

14 Applicant declaration

I declare that the information I have provided is true and correct. I understand that it is an offence under the *Environmental Protection Act 1994* to give information that I know is false, misleading or incomplete.

I will comply with all conditions on my environmental authority as well as any relevant provisions in the *Environmental Protection Act 1994.*

I understand that I am responsible for managing the environmental impacts of these activities, and that approval of this application is not an endorsement by the administering authority of the effectiveness of the management practices proposed or implemented.

Applicant's full name*	Applicant's position*
Applicant's signature*	Date*

Submit attachment, together with any additional information, with all relevant Development application Forms to the assessment manager for the development application.

Attachment 1

Joint applicants and appointment of principal applicant

We are joint applicants for this environmental authority application and hereby appoint _____ as the principal applicant to receive statutory documents relating to this application.

Name - individual or contact person if applicant is an organisation*	Suitable Operator Reference Number*
Organisation name, including trading name (*if an organisation)	ABN/ACN (*if an organisation)
Residential or registered business address (not a post office box)*	Phone*
Postal address (if same as above, state "AS ABOVE") *	Facsimile
Email*	☐ Indicate if you want to receive correspondence via email
Signature*	Date*

Name - individual or contact person if applicant is an organisation*	Suitable Operator Reference Number*
Organisation name including trading name (*if an organisation)	ABN/ACN (*if an organisation)
Residential or registered business address (not a post office box)*	Phone*
Postal address (if same as above, state "AS ABOVE")*	Facsimile
Email*	☐ Indicate if you want to receive correspondence via email
Signature*	Date*

Name - individual or contact person if applicant is an organisation*	Suitable Operator Reference Number*
Business name including trading name (*if an organisation)	ABN/ACN (*if an organisation)
Residential or registered business address (not a post office box)*	Phone*
Postal address (if same as above, state "AS ABOVE")*	Facsimile
Email*	☐ Indicate if you want to receive correspondence via email
Signature*	Date*

Attachment 2

List of locations where the ERA(s) will be carried out.

Where there is more than one location list all locations and which ERA(s) will be conducted at each location.

Number*	Street Name*	Suburb/Town*	Postcode*	ERA/s*
Real Property Description* Lot Plan		Specific area within the location ie GPS or other descriptor (*if applicable e.g. dredging)		

Number*	Street Name*	Suburb/Town*	Postcode*	ERA/s*
Real Property Description* Lot Plan		Specific area within the location ie GPS or other descriptor (*if applicable e.g. dredging)		

Number*	Street Name*	Suburb/Town*	Postcode*	ERA/s*
Real Property Description* Lot Plan		Specific area within the location ie GPS or other descriptor (*if applicable e.g. dredging)		

Number*	Street Name*	Suburb/Town*	Postcode*	ERA/s*
Real Property Description* Lot Plan		Specific area within the location ie GPS or other descriptor (*if applicable e.g. dredging)		

Number*	Street Name*	Suburb/Town*	Postcode*	ERA/s*
Real Property Description* Lot Plan		Specific area within the location ie GPS or other descriptor (*if applicable e.g. dredging)		

Number*	Street Name*	Suburb/Town*	Postcode*	ERA/s*
Real Property Description* Lot Plan		Specific area within the location ie GPS or other descriptor (*if applicable e.g. dredging)		

Number*	Street Name*	Suburb/Town*	Postcode*	ERA/s*
Real Property Description* Lot Plan		Specific area within the location ie GPS or other descriptor (*if applicable e.g. dredging)		

Appendix B

State Govt. Landowners Consent

DELIVERING FOR QUEENSLAND | Queensland Government

Department of
Natural Resources and Mines, Manufacturing and Regional and Rural Development

File / Ref number: 2025/002284

26 September 2025

Mr Patrick Clifton
RPS AAP Consulting Pty Ltd
PO Box 1949
Cairns Qld 4870

patrick.clifton@rpsconsulting.com

Dear Patrick,

Application for Owners Consent a development application for a material change of use and tidal works outside of a canal for the upgrades to the Daintree River Ferry Crossing within the Daintree River and Cape Tribulation Road – Drawing BEJ758-DW-CV-GEN-0002

Reference is made to your request dated 2 September 2025 requesting owner's consent to a development application under section 51(2) of the *Planning Act 2016*, for a material change of use and tidal works outside a canal for the upgrades to the Daintree River Ferry Crossing within the Daintree River and Cape Tribulation Road.

The department hereby gives owner's consent as the owner to accompany the development application for the purpose of section 51(2) of the *Planning Act 2016* to a development application, application under section 52(2) of the *Planning Act 2016*, for a material change of use and tidal works outside a canal for the upgrades to the Daintree River Ferry Crossing within the Daintree River and Cape Tribulation Road.

Although owner's consent to the development application has been provided and no tenure under the Land Act is required, your client is to undertake works only if and when the development application has been approved by the assessment manager and in accordance with the conditions of that approval.

A copy of this letter is to be attached to your DA Form 1 as the required evidence of owners consent.

Your client will also need to comply with all other legislative and regulatory requirements which may also include approvals that are not part of the assessment of the development application under the *Planning Act 2016* e.g. a marine park permit if in a marine park.

Further, please note that the above consent will expire on **26 March 2026**. Should the development application not be lodged with the assessment manager prior to this date, your client will be required again to lodge the DA Form 1 and any attachments with this Department with a further request for owner's consent - any further request will need to be reconsidered by the Department.

It is also advised that any land use activities must comply with the *Aboriginal Cultural Heritage Act 2003* or the *Torres Strait Islander Heritage Act 2003*.

Finally, owner's consent is required under the *Planning Act 2016* to enable the application to be considered properly made for lodging with the assessment manager and is a completely separate process to assessment of the application under the *Planning Act 2016*.

Accordingly, the State may act at a later date as assessment manager in the assessment of the development application - providing owner's consent will not influence any role the State may have in this development assessment.

If you wish to discuss this matter, please contact Antoinette Russell on 4222 5427.

All future correspondence relative to this matter is to be referred to the contact Officer at the address below or by email to LST1enq@resources.qld.gov.au.

Please quote reference number 2025/002377 in any future correspondence.

Yours sincerely

D. Carrillow

A duly authorised delegate of the Minister
under the current Land Act (Ministerial) Delegation

DA Form 1 – Development application details

Approved form (version 1.6 effective 2 August 2024) made under section 282 of the Planning Act 2016.

This form **must** be used to make a development application **involving code assessment or impact assessment**, except when applying for development involving only building work.

For a development application involving **building work only**, use *DA Form 2 – Building work details*.

For a development application involving **building work associated with any other type of assessable development (i.e. material change of use, operational work or reconfiguring a lot)**, use this form (*DA Form 1*) **and** parts 4 to 6 of *DA Form 2 – Building work details*.

Unless stated otherwise, all parts of this form **must** be completed in full and all required supporting information **must** accompany the development application.

One or more additional pages may be attached as a schedule to this development application if there is insufficient space on the form to include all the necessary information.

This form and any other form relevant to the development application must be used to make a development application relating to strategic port land and Brisbane core port land under the *Transport Infrastructure Act 1994*, and airport land under the *Airport Assets (Restructuring and Disposal) Act 2008*. For the purpose of assessing a development application relating to strategic port land and Brisbane core port land, any reference to a planning scheme is taken to mean a land use plan for the strategic port land, Brisbane port land use plan for Brisbane core port land, or a land use plan for airport land.

Note: *All terms used in this form have the meaning given under the Planning Act 2016, the Planning Regulation 2017, or the Development Assessment Rules (DA Rules).*

PART 1 – APPLICANT DETAILS

1) Applicant details	
Applicant name(s) *(individual or company full name)*	Douglas Shire Council
Contact name *(only applicable for companies)*	C/- RPS AAP Consulting Pty Ltd, Patrick Clifton
Postal address *(P.O. Box or street address)*	PO Box 1949
Suburb	Cairns
State	QLD
Postcode	4870
Country	Australia
Contact number	07 4031 1366
Email address *(non-mandatory)*	Patrick.clifton@rpsconsulting.com
Mobile number *(non-mandatory)*	
Fax number *(non-mandatory)*	
Applicant's reference number(s) *(if applicable)*	AU017394
1.1) Home-based business	
☐ Personal details to remain private in accordance with section 264(6) of *Planning Act 2016*	

2) Owner's consent
2.1) Is written consent of the owner required for this development application?
☒ Yes – the written consent of the owner(s) is attached to this development application ☐ No – proceed to 3)

PART 2 – LOCATION DETAILS

3) Location of the premises *(complete 3.1) or 3.2), and 3.3) as applicable)*

***Note**: Provide details below and attach a site plan for any or all premises part of the development application. For further information, see DA Forms Guide: Relevant plans.*

3.1) Street address and lot on plan

☒ Street address **AND** lot on plan *(all lots must be listed)*, ***or***

☒ Street address **AND** lot on plan for an adjoining or adjacent property of the premises *(appropriate for development in water but adjoining or adjacent to land e.g. jetty, pontoon. All lots must be listed).*

a)	Unit No.	Street No.	Street Name and Type	Suburb
		362	Cape Tribulation Road	Lower Daintree
	Postcode	Lot No.	Plan Type and Number *(e.g. RP, SP)*	Local Government Area(s)
	4873	1	RP804943	Douglas Shire Council
b)	Unit No.	Street No.	Street Name and Type	Suburb
			Cape Tribulation Road	Lower Daintree
	Postcode	Lot No.	Plan Type and Number *(e.g. RP, SP)*	Local Government Area(s)
	4873	4	SP126928	Douglas Shire Council
c)	Unit No.	Street No.	Street Name and Type	Suburb
			Cape Tribulation Road	Lower Daintree
	Postcode	Lot No.	Plan Type and Number *(e.g. RP, SP)*	Local Government Area(s)
	4873	2	RP865069	Douglas Shire Council
d)	Unit No.	Street No.	Street Name and Type	Suburb
			Cape Tribulation Road	Lower Daintree
	Postcode	Lot No.	Plan Type and Number *(e.g. RP, SP)*	Local Government Area(s)
	4783	359	SP215752	Douglas Shire Council
e)	Unit No.	Street No.	Street Name and Type	Suburb
			Daintree River - Cape Tribulation Road	Lower Daintree
	Postcode	Lot No.	Plan Type and Number *(e.g. RP, SP)*	Local Government Area(s)
	4783	Adjacent 359	Adjacent SP215752	Douglas Shire Council

3.2) Coordinates of premises *(appropriate for development in remote areas, over part of a lot or in water not adjoining or adjacent to land e.g. channel dredging in Moreton Bay)*

***Note**: Place each set of coordinates in a separate row.*

☐ Coordinates of premises by longitude and latitude

Longitude(s)	Latitude(s)	Datum	Local Government Area(s) *(if applicable)*
		☐ WGS84 ☐ GDA94 ☐ Other:	

☐ Coordinates of premises by easting and northing

Easting(s)	Northing(s)	Zone Ref.	Datum	Local Government Area(s) *(if applicable)*
		☐ 54 ☐ 55 ☐ 56	☐ WGS84 ☐ GDA94 ☐ Other:	

3.3) Additional premises

☐ Additional premises are relevant to this development application and the details of these premises have been attached in a schedule to this development application

☐ Not required

4) Identify any of the following that apply to the premises and provide any relevant details	
☒ In or adjacent to a water body or watercourse or in or above an aquifer	
Name of water body, watercourse or aquifer:	Daintree River
☐ On strategic port land under the *Transport Infrastructure Act 1994*	
Lot on plan description of strategic port land:	
Name of port authority for the lot:	
☒ In a tidal area	
Name of local government for the tidal area *(if applicable)*:	Douglas Shire Council
Name of port authority for tidal area *(if applicable)*	Ports North (Cairns Port Authority)

☐ On airport land under the *Airport Assets (Restructuring and Disposal) Act 2008*	
Name of airport:	
☐ Listed on the Environmental Management Register (EMR) under the *Environmental Protection Act 1994*	
EMR site identification:	
☐ Listed on the Contaminated Land Register (CLR) under the *Environmental Protection Act 1994*	
CLR site identification:	

5) Are there any existing easements over the premises?

Note: Easement uses vary throughout Queensland and are to be identified correctly and accurately. For further information on easements and how they may affect the proposed development, see DA Forms Guide.

☐ Yes – All easement locations, types and dimensions are included in plans submitted with this development application

☒ No

PART 3 – DEVELOPMENT DETAILS

Section 1 – Aspects of development

6.1) Provide details about the first development aspect

a) What is the type of development? *(tick only one box)*

☒ Material change of use ☐ Reconfiguring a lot ☐ Operational work ☐ Building work

b) What is the approval type? *(tick only one box)*

☒ Development permit ☐ Preliminary approval ☐ Preliminary approval that includes a variation approval

c) What is the level of assessment?

☒ Code assessment ☐ Impact assessment *(requires public notification)*

d) Provide a brief description of the proposal *(e.g. 6 unit apartment building defined as multi-unit dwelling, reconfiguration of 1 lot into 3 lots)*:

ERA 16 – Extraction and Screening Activities

e) Relevant plans

***Note**: Relevant plans are required to be submitted for all aspects of this development application. For further information, see DA Forms guide: Relevant plans.*

☒ Relevant plans of the proposed development are attached to the development application

6.2) Provide details about the second development aspect

a) What is the type of development? *(tick only one box)*

☐ Material change of use ☐ Reconfiguring a lot ☒ Operational work ☐ Building work

b) What is the approval type? *(tick only one box)*

☒ Development permit ☐ Preliminary approval ☐ Preliminary approval that includes a variation approval

c) What is the level of assessment?

☒ Code assessment ☐ Impact assessment *(requires public notification)*

d) Provide a brief description of the proposal *(e.g. 6 unit apartment building defined as multi-unit dwelling, reconfiguration of 1 lot into 3 lots)*:

Prescribed Tidal Works and land based Operational Works (road and car park construction)

e) Relevant plans

***Note**: Relevant plans are required to be submitted for all aspects of this development application. For further information, see DA Forms Guide: Relevant plans.*

☒ Relevant plans of the proposed development are attached to the development application

6.3) Additional aspects of development
☐ Additional aspects of development are relevant to this development application and the details for these aspects that would be required under Part 3 Section 1 of this form have been attached to this development application
☒ Not required
6.4) Is the application for State facilitated development?
☐ Yes - Has a notice of declaration been given by the Minister?
☒ No

Section 2 – Further development details

7) Does the proposed development application involve any of the following?	
Material change of use	☒ Yes – complete division 1 if assessable against a local planning instrument
Reconfiguring a lot	☐ Yes – complete division 2
Operational work	☒ Yes – complete division 3
Building work	☐ Yes – complete *DA Form 2 – Building work details*

Division 1 – Material change of use

Note: *This division is only required to be completed if any part of the development application involves a material change of use assessable against a local planning instrument.*

8.1) Describe the proposed material change of use			
Provide a general description of the proposed use	Provide the planning scheme definition *(include each definition in a new row)*	Number of dwelling units *(if applicable)*	Gross floor area (m^2) *(if applicable)*
Maintenance Dredging	ERA 16 – Extraction and Screening Activities	n/a	n/a

8.2) Does the proposed use involve the use of existing buildings on the premises?
☐ Yes
☒ No

8.3) Does the proposed development relate to temporary accepted development under the Planning Regulation?	
☐ Yes – provide details below or include details in a schedule to this development application	
☒ No	
Provide a general description of the temporary accepted development	Specify the stated period dates under the Planning Regulation

Division 2 – Reconfiguring a lot

Note: *This division is only required to be completed if any part of the development application involves reconfiguring a lot.*

9.1) What is the total number of existing lots making up the premises?

9.2) What is the nature of the lot reconfiguration? *(tick all applicable boxes)*	
☐ Subdivision *(complete 10)*	☐ Dividing land into parts by agreement *(complete 11)*
☐ Boundary realignment *(complete 12)*	☐ Creating or changing an easement giving access to a lot from a constructed road *(complete 13)*

10) Subdivision				
10.1) For this development, how many lots are being created and what is the intended use of those lots:				
Intended use of lots created	Residential	Commercial	Industrial	Other, please specify:
Number of lots created				

10.2) Will the subdivision be staged?	
☐ Yes – provide additional details below ☐ No	
How many stages will the works include?	
What stage(s) will this development application apply to?	

11) Dividing land into parts by agreement – how many parts are being created and what is the intended use of the parts?				
Intended use of parts created	Residential	Commercial	Industrial	Other, please specify:
Number of parts created				

12) Boundary realignment			
12.1) What are the current and proposed areas for each lot comprising the premises?			
Current lot		Proposed lot	
Lot on plan description	Area (m^2)	Lot on plan description	Area (m^2)
12.2) What is the reason for the boundary realignment?			

13) What are the dimensions and nature of any existing easements being changed and/or any proposed easement? *(attach schedule if there are more than two easements)*				
Existing or proposed?	Width (m)	Length (m)	Purpose of the easement? *(e.g. pedestrian access)*	Identify the land/lot(s) benefitted by the easement

Division 3 – Operational work

Note: *This division is only required to be completed if any part of the development application involves operational work.*

14.1) What is the nature of the operational work?		
☒ Road work	☒ Stormwater	☐ Water infrastructure
☒ Drainage work	☒ Earthworks	☐ Sewage infrastructure
☐ Landscaping	☐ Signage	☒ Clearing vegetation
☒ Other – please specify:	Prescribed Tidal Works	

14.2) Is the operational work necessary to facilitate the creation of new lots? *(e.g. subdivision)*	
☐ Yes – specify number of new lots:	
☒ No	

14.3) What is the monetary value of the proposed operational work? *(include GST, materials and labour)*

$TBC

PART 4 – ASSESSMENT MANAGER DETAILS

15) Identify the assessment manager(s) who will be assessing this development application

Douglas Shire Council

16) Has the local government agreed to apply a superseded planning scheme for this development application?

- ☐ Yes – a copy of the decision notice is attached to this development application
- ☐ The local government is taken to have agreed to the superseded planning scheme request – relevant documents attached
- ☒ No

PART 5 – REFERRAL DETAILS

17) Does this development application include any aspects that have any referral requirements?

***Note**: A development application will require referral if prescribed by the* Planning Regulation 2017.

- ☐ No, there are no referral requirements relevant to any development aspects identified in this development application – proceed to Part 6

Matters requiring referral to the **Chief Executive of the *Planning Act 2016***:

- ☐ Clearing native vegetation
- ☐ Contaminated land *(unexploded ordnance)*
- ☒ Environmentally relevant activities (ERA) *(only if the ERA has not been devolved to a local government)*
- ☐ Fisheries – aquaculture
- ☐ Fisheries – declared fish habitat area
- ☒ Fisheries – marine plants
- ☐ Fisheries – waterway barrier works
- ☐ Hazardous chemical facilities
- ☐ Heritage places – Queensland heritage place *(on or near a Queensland heritage place)*
- ☐ Infrastructure-related referrals – designated premises
- ☐ Infrastructure-related referrals – state transport infrastructure
- ☐ Infrastructure-related referrals – State transport corridor and future State transport corridor
- ☐ Infrastructure-related referrals – State-controlled transport tunnels and future state-controlled transport tunnels
- ☐ Infrastructure-related referrals – near a state-controlled road intersection
- ☐ Koala habitat in SEQ region – interfering with koala habitat in koala habitat areas outside koala priority areas
- ☐ Koala habitat in SEQ region – key resource areas
- ☐ Ports – Brisbane core port land – near a State transport corridor or future State transport corridor
- ☐ Ports – Brisbane core port land – environmentally relevant activity (ERA)
- ☐ Ports – Brisbane core port land – tidal works or work in a coastal management district
- ☐ Ports – Brisbane core port land – hazardous chemical facility
- ☐ Ports – Brisbane core port land – taking or interfering with water
- ☐ Ports – Brisbane core port land – referable dams
- ☐ Ports – Brisbane core port land – fisheries
- ☐ Ports – Land within Port of Brisbane's port limits *(below high-water mark)*
- ☐ SEQ development area
- ☐ SEQ regional landscape and rural production area or SEQ rural living area – tourist activity or sport and recreation activity
- ☐ SEQ regional landscape and rural production area or SEQ rural living area – community activity
- ☐ SEQ regional landscape and rural production area or SEQ rural living area – indoor recreation
- ☐ SEQ regional landscape and rural production area or SEQ rural living area – urban activity
- ☐ SEQ regional landscape and rural production area or SEQ rural living area – combined use
- ☐ SEQ northern inter-urban break – tourist activity or sport and recreation activity

☐ SEQ northern inter-urban break – community activity
☐ SEQ northern inter-urban break – indoor recreation
☐ SEQ northern inter-urban break – urban activity
☐ SEQ northern inter-urban break – combined use
☒ Tidal works or works in a coastal management district
☐ Reconfiguring a lot in a coastal management district or for a canal
☐ Erosion prone area in a coastal management district
☐ Urban design
☐ Water-related development – taking or interfering with water
☐ Water-related development – removing quarry material *(from a watercourse or lake)*
☐ Water-related development – referable dams
☐ Water-related development –levees *(category 3 levees only)*
☐ Wetland protection area

Matters requiring referral to the **local government:**
☐ Airport land
☐ Environmentally relevant activities (ERA) *(only if the ERA has been devolved to local government)*
☐ Heritage places – Local heritage places

Matters requiring referral to the **Chief Executive of the distribution entity or transmission entity:**
☐ Infrastructure-related referrals – Electricity infrastructure

Matters requiring referral to:
- The **Chief Executive of the holder of the licence**, if not an individual
- The **holder of the licence**, if the holder of the licence is an individual

☐ Infrastructure-related referrals – Oil and gas infrastructure

Matters requiring referral to the **Brisbane City Council:**
☐ Ports – Brisbane core port land

Matters requiring referral to the **Minister responsible for administering the *Transport Infrastructure Act 1994*:**
☐ Ports – Brisbane core port land *(where inconsistent with the Brisbane port LUP for transport reasons)*
☐ Ports – Strategic port land

Matters requiring referral to the **relevant port operator**, if applicant is not port operator**:**
☐ Ports – Land within Port of Brisbane's port limits *(below high-water mark)*

Matters requiring referral to the **Chief Executive of the relevant port authority:**
☐ Ports – Land within limits of another port *(below high-water mark)*

Matters requiring referral to the **Gold Coast Waterways Authority:**
☐ Tidal works or work in a coastal management district *(in Gold Coast waters)*

Matters requiring referral to the **Queensland Fire and Emergency Service:**
☐ Tidal works or work in a coastal management district *(involving a marina (more than six vessel berths))*

18) Has any referral agency provided a referral response for this development application?

☐ Yes – referral response(s) received and listed below are attached to this development application
☒ No

Referral requirement	Referral agency	Date of referral response

Identify and describe any changes made to the proposed development application that was the subject of the referral response and this development application, or include details in a schedule to this development application *(if applicable)*.

PART 6 – INFORMATION REQUEST

19) Information request under the DA Rules

☒ I agree to receive an information request if determined necessary for this development application

☐ I do not agree to accept an information request for this development application

Note: *By not agreeing to accept an information request I, the applicant, acknowledge:*

- *that this development application will be assessed and decided based on the information provided when making this development application and the assessment manager and any referral agencies relevant to the development application are not obligated under the DA Rules to accept any additional information provided by the applicant for the development application unless agreed to by the relevant parties*
- *Part 3 under Chapter 1 of the DA Rules will still apply if the application is an application listed under section 11.3 of the DA Rules or*
- *Part 2under Chapter 2 of the DA Rules will still apply if the application is for state facilitated development*

Further advice about information requests is contained in the DA Forms Guide.

PART 7 – FURTHER DETAILS

20) Are there any associated development applications or current approvals? *(e.g. a preliminary approval)*

☐ Yes – provide details below or include details in a schedule to this development application

☒ No

List of approval/development application references	Reference number	Date	Assessment manager
☐ Approval ☐ Development application			
☐ Approval ☐ Development application			

21) Has the portable long service leave levy been paid? *(only applicable to development applications involving building work or operational work)*

☐ Yes – a copy of the receipted QLeave form is attached to this development application

☒ No – I, the applicant will provide evidence that the portable long service leave levy has been paid before the assessment manager decides the development application. I acknowledge that the assessment manager may give a development approval only if I provide evidence that the portable long service leave levy has been paid

☐ Not applicable *(e.g. building and construction work is less than $150,000 excluding GST)*

Amount paid	Date paid (dd/mm/yy)	QLeave levy number (A, B or E)
$		

22) Is this development application in response to a show cause notice or required as a result of an enforcement notice?

☐ Yes – show cause or enforcement notice is attached

☒ No

23) Further legislative requirements

Environmentally relevant activities

23.1) Is this development application also taken to be an application for an environmental authority for an **Environmentally Relevant Activity (ERA)** under section 115 of the *Environmental Protection Act 1994*?

☒ Yes – the required attachment (form ESR/2015/1791) for an application for an environmental authority accompanies this development application, and details are provided in the table below

☐ No

***Note**: Application for an environmental authority can be found by searching "ESR/2015/1791" as a search term at www.qld.gov.au. An ERA requires an environmental authority to operate. See www.business.qld.gov.au for further information.*

Proposed ERA number:	16	Proposed ERA threshold:	1,000 to 10,000t per annum
Proposed ERA name:	Extractive and screening activities		

☐ Multiple ERAs are applicable to this development application and the details have been attached in a schedule to this development application.

Hazardous chemical facilities

23.2) Is this development application for a **hazardous chemical facility**?

☐ Yes – *Form 536: Notification of a facility exceeding 10% of schedule 15 threshold* is attached to this development application

☒ No

***Note**: See www.business.qld.gov.au for further information about hazardous chemical notifications.*

Clearing native vegetation

23.3) Does this development application involve **clearing native vegetation** that requires written confirmation that the chief executive of the *Vegetation Management Act 1999* is satisfied the clearing is for a relevant purpose under section 22A of the *Vegetation Management Act 1999*?

☐ Yes – this development application includes written confirmation from the chief executive of the *Vegetation Management Act 1999* (s22A determination)

☒ No

***Note**: 1. Where a development application for operational work or material change of use requires a s22A determination and this is not included, the development application is prohibited development.*
2. See https://www.qld.gov.au/environment/land/vegetation/applying for further information on how to obtain a s22A determination.

Environmental offsets

23.4) Is this development application taken to be a prescribed activity that may have a significant residual impact on a **prescribed environmental matter** under the *Environmental Offsets Act 2014*?

☒ Yes – I acknowledge that an environmental offset must be provided for any prescribed activity assessed as having a significant residual impact on a prescribed environmental matter

☐ No

***Note**: The environmental offset section of the Queensland Government's website can be accessed at www.qld.gov.au for further information on environmental offsets.*

Koala habitat in SEQ Region

23.5) Does this development application involve a material change of use, reconfiguring a lot or operational work which is assessable development under Schedule 10, Part 10 of the Planning Regulation 2017?

☐ Yes – the development application involves premises in the koala habitat area in the koala priority area

☐ Yes – the development application involves premises in the koala habitat area outside the koala priority area

☒ No

***Note**: If a koala habitat area determination has been obtained for this premises and is current over the land, it should be provided as part of this development application. See koala habitat area guidance materials at www.desi.qld.gov.au for further information.*

Water resources

23.6) Does this development application involve **taking or interfering with underground water through an artesian or subartesian bore, taking or interfering with water in a watercourse, lake or spring, or taking overland flow water under the *Water Act 2000***?

☐ Yes – the relevant template is completed and attached to this development application and I acknowledge that a relevant authorisation or licence under the *Water Act 2000* may be required prior to commencing development

☒ No

***Note**: Contact the Department of Resources at www.resources.qld.gov.au for further information.*

DA templates are available from planning.statedevelopment.qld.gov.au. If the development application involves:

- *Taking or interfering with underground water through an artesian or subartesian bore: complete DA Form 1 Template 1*
- *Taking or interfering with water in a watercourse, lake or spring: complete DA Form1 Template 2*
- *Taking overland flow water: complete DA Form 1 Template 3.*

Waterway barrier works

23.7) Does this application involve **waterway barrier works?**

☐ Yes – the relevant template is completed and attached to this development application

☒ No

DA templates are available from planning.statedevelopment.qld.gov.au. For a development application involving waterway barrier works, complete DA Form 1 Template 4.

Marine activities

23.8) Does this development application involve **aquaculture, works within a declared fish habitat area or removal, disturbance or destruction of marine plants?**

☒ Yes – an associated *resource* allocation authority is attached to this development application, if required under the *Fisheries Act 1994*

☐ No

***Note**: See guidance materials at www.daf.qld.gov.au for further information.*

Quarry materials from a watercourse or lake

23.9) Does this development application involve the **removal of quarry materials from a watercourse or lake** under the *Water Act 2000?*

☐ Yes – I acknowledge that a quarry material allocation notice must be obtained prior to commencing development

☒ No

***Note**: Contact the Department of Resources at www.resources.qld.gov.au and www.business.qld.gov.au for further information.*

Quarry materials from land under tidal waters

23.10) Does this development application involve the **removal of quarry materials from land under tidal water** under the *Coastal Protection and Management Act 1995?*

☐ Yes – I acknowledge that a quarry material allocation notice must be obtained prior to commencing development

☒ No

***Note**: Contact the Department of Environment, Science and Innovation at www.desi.qld.gov.au for further information.*

Referable dams

23.11) Does this development application involve a **referable dam** required to be failure impact assessed under section 343 of the *Water Supply (Safety and Reliability) Act 2008* (the Water Supply Act)?

☐ Yes – the 'Notice Accepting a Failure Impact Assessment' from the chief executive administering the Water Supply Act is attached to this development application

☒ No

***Note**: See guidance materials at www.resources.qld.gov.au for further information.*

Tidal work or development within a coastal management district

23.12) Does this development application involve **tidal work or development in a coastal management district**?

☒ Yes – the following is included with this development application:
- ☒ Evidence the proposal meets the code for assessable development that is prescribed tidal work *(only required if application involves prescribed tidal work)*
- ☒ A certificate of title

☐ No

***Note**: See guidance materials at www.desi.qld.gov.au for further information.*

Queensland and local heritage places

23.13) Does this development application propose development on or adjoining a place entered in the **Queensland heritage register** or on a place entered in a local government's **Local Heritage Register**?

☐ Yes – details of the heritage place are provided in the table below

☒ No

***Note**: See guidance materials at www.desi.qld.gov.au for information requirements regarding development of Queensland heritage places.*

For a heritage place that has cultural heritage significance as a local heritage place and a Queensland heritage place, provisions are in place under the Planning Act 2016 that limit a local categorising instrument from including an assessment benchmark about the effect or impact of, development on the stated cultural heritage significance of that place. See guidance materials at www.planning.statedevelopment.qldgov.au for information regarding assessment of Queensland heritage places.

Name of the heritage place:		Place ID:	

Decision under section 62 of the *Transport Infrastructure Act 1994*

23.14) Does this development application involve new or changed access to a state-controlled road?

☐ Yes – this application will be taken to be an application for a decision under section 62 of the *Transport Infrastructure Act 1994* (subject to the conditions in section 75 of the *Transport Infrastructure Act 1994* being satisfied)

☒ No

Walkable neighbourhoods assessment benchmarks under Schedule 12A of the Planning Regulation

23.15) Does this development application involve reconfiguring a lot into 2 or more lots in certain residential zones (except rural residential zones), where at least one road is created or extended?

☒ Yes – Schedule 12A is applicable to the development application and the assessment benchmarks contained in schedule 12A have been considered

☐ No

***Note**: See guidance materials at www.planning.statedevelopment.qld.gov.au for further information.*

PART 8 – CHECKLIST AND APPLICANT DECLARATION

24) Development application checklist	
I have identified the assessment manager in question 15 and all relevant referral requirement(s) in question 17 ***Note**: See the Planning Regulation 2017 for referral requirements*	☒ Yes
If building work is associated with the proposed development, Parts 4 to 6 of *DA Form 2 – Building work details* have been completed and attached to this development application	☐ Yes ☒ Not applicable
Supporting information addressing any applicable assessment benchmarks is with the development application ***Note**: This is a mandatory requirement and includes any relevant templates under question 23, a planning report and any technical reports required by the relevant categorising instruments (e.g. local government planning schemes, State Planning Policy, State Development Assessment Provisions). For further information, see DA Forms Guide: Planning Report Template.*	☒ Yes
Relevant plans of the development are attached to this development application ***Note**: Relevant plans are required to be submitted for all aspects of this development application. For further information, see DA Forms Guide: Relevant plans.*	☒ Yes
The portable long service leave levy for QLeave has been paid, or will be paid before a development permit is issued *(see 21)*	☒ Yes ☐ Not applicable

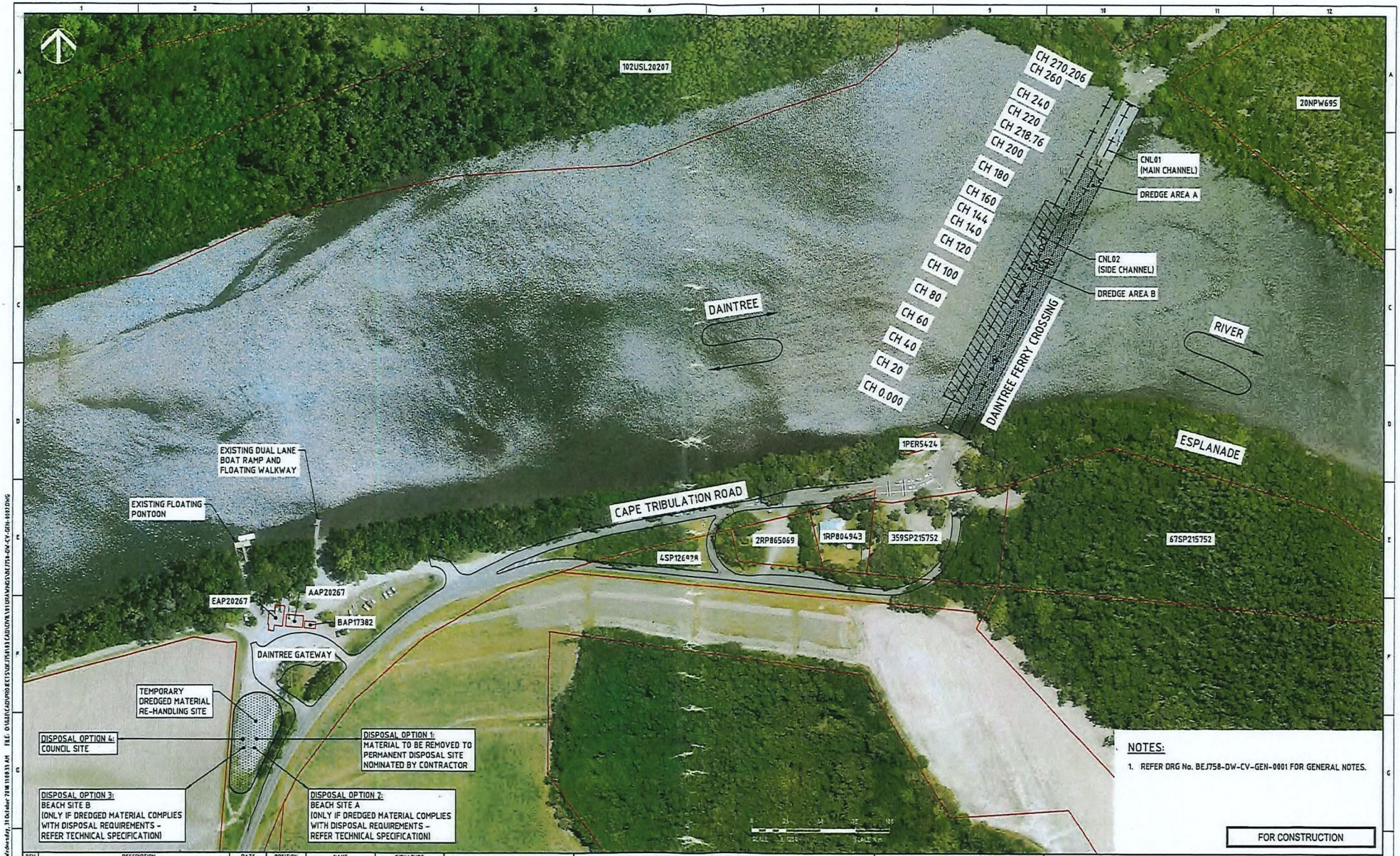
25) Applicant declaration
☒ By making this development application, I declare that all information in this development application is true and correct ☒ Where an email address is provided in Part 1 of this form, I consent to receive future electronic communications from the assessment manager and any referral agency for the development application where written information is required or permitted pursuant to sections 11 and 12 of the *Electronic Transactions Act 2001* ***Note**: It is unlawful to intentionally provide false or misleading information.*
Privacy – Personal information collected in this form will be used by the assessment manager and/or chosen assessment manager, any relevant referral agency and/or building certifier (including any professional advisers which may be engaged by those entities) while processing, assessing and deciding the development application. All information relating to this development application may be available for inspection and purchase, and/or published on the assessment manager's and/or referral agency's website. Personal information will not be disclosed for a purpose unrelated to the *Planning Act 2016*, Planning Regulation 2017 and the DA Rules except where: • such disclosure is in accordance with the provisions about public access to documents contained in the *Planning Act 2016* and the Planning Regulation 2017, and the access rules made under the *Planning Act 2016* and Planning Regulation 2017; or • required by other legislation (including the *Right to Information Act 2009*); or • otherwise required by law. This information may be stored in relevant databases. The information collected will be retained as required by the *Public Records Act 2002*.

PART 9 – FOR COMPLETION OF THE ASSESSMENT MANAGER – FOR OFFICE USE ONLY

Date received: Reference number(s):

Notification of engagement of alternative assessment manager	
Prescribed assessment manager	
Name of chosen assessment manager	
Date chosen assessment manager engaged	
Contact number of chosen assessment manager	
Relevant licence number(s) of chosen assessment manager	

QLeave notification and payment *Note: For completion by assessment manager if applicable*			
Description of the work			
QLeave project number			
Amount paid ($)		Date paid (dd/mm/yy)	
Date receipted form sighted by assessment manager			
Name of officer who sighted the form			



NOTES:

1. REFER DRG No. BEJ758-DW-CV-GEN-0001 FOR GENERAL NOTES.

FOR CONSTRUCTION

REV	DESCRIPTION	DATE
1	ISSUED FOR CONSTRUCTION	31.10.18
B	ISSUED FOR CONSTRUCTION	26.06.18
A	ISSUED FOR CLIENT REVIEW	20.12.17

POSITION	NAME	SIGNATURE
DRAFTING CHECK	P. LAS GOURGUES	
ORIGINATE/ DESIGN	K.STEMM	
INDEPENDENT CHECK	P.CUMMINGS	
TECHNICAL APPROVAL	K.STEMM	
PROJECT APPROVAL	K.STEMM	
CLIENT APPROVAL		

ENGINEERING CERTIFICATION FOR AND ON BEHALF OF KELLOGG BROWN & ROOT Pty Ltd.

RPEQ NAME: P.CUMMINGS

RPEQ NO: 2442

RPEQ DATE: 28.06.18

RPEQ SIGNATURE:

DOUGLAS SHIRE COUNCIL

Kellogg Brown & Root Pty Ltd
KBR
Kellogg Brown & Root Pty Ltd
ABN 91 007 660 317

DRAWING SCALE: 1:1250
DRAFTER: J.BROOKER
ORIG. SIZE: A1

TITLE
DOUGLAS SHIRE COUNCIL
DAINTREE RIVER FERRY CROSSING
CHANNEL DREDGING & DREDGED MATERIAL PLACEMENT
SITE PLAN

DRAWING No: BEJ758-DW-CV-GEN-0002
REVISION: 1

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DATE: Wednesday, 31 October 2018 11:49:33 AM FILE: O:\AUSEA\GLD\PROJECTS\BEJ758\13 CAD\CIVIL\11 DRAWINGS\BEJ758-DW-CV-GEN-0002.DWG

Appendix C

Certificate(s) of Title

Current Title Search

Queensland Titles Registry Pty Ltd
ABN 23 648 568 101

Title Reference:	**21453151**	**Search Date:**	26/08/2025 10:01
Date Title Created:	22/11/1990	**Request No:**	53117262
Previous Title:	20682240, 21191001		

ESTATE AND LAND

Estate in Fee Simple

LOT 1 REGISTERED PLAN 804943
Local Government: DOUGLAS

REGISTERED OWNER

Dealing No: 716386009 24/03/2015

DOUGLAS SHIRE COUNCIL

EASEMENTS, ENCUMBRANCES AND INTERESTS

1. Rights and interests reserved to the Crown by
Deed of Grant No. 10721082 (POR 217)

ADMINISTRATIVE ADVICES

NIL

UNREGISTERED DEALINGS

NIL

** End of Current Title Search **

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Requested by: D-ENQ DYE & DURHAM (S)

Current Title Search

Queensland Titles Registry Pty Ltd
ABN 23 648 568 101

Title Reference:	**50082724**	**Search Date:**	26/08/2025 10:00
Date Title Created:	31/07/1995	**Request No:**	53117233
Previous Title:	50012684		

ESTATE AND LAND

Estate in Fee Simple

LOT 2 REGISTERED PLAN 865069
Local Government: DOUGLAS

REGISTERED OWNER

Dealing No: 716386009 24/03/2015

DOUGLAS SHIRE COUNCIL

EASEMENTS, ENCUMBRANCES AND INTERESTS

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ADMINISTRATIVE ADVICES

NIL

UNREGISTERED DEALINGS

NIL

** End of Current Title Search **

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Current Title Search

Queensland Titles Registry Pty Ltd
ABN 23 648 568 101

Title Reference:	**50311507**	**Search Date:**	26/08/2025 09:58
Date Title Created:	12/05/2000	**Request No:**	53117163
Previous Title:	50082725		

ESTATE AND LAND

Estate in Fee Simple

LOT 4 SURVEY PLAN 126928
Local Government: DOUGLAS

REGISTERED OWNER

Dealing No: 716386009 24/03/2015

DOUGLAS SHIRE COUNCIL

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ADMINISTRATIVE ADVICES

NIL

UNREGISTERED DEALINGS

NIL

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Current Reserve Search

Queensland Titles Registry Pty Ltd
ABN 23 648 568 101

Title Reference:	**49014679**
Date Reserve Gazetted:	10/10/1981
Page:	575

Search Date:	26/08/2025 10:02
Request No:	53117309

DETAILS

Opening Ref:	SL 32270
Purpose:	RECREATION
Sub-Purpose:	
Local Name:	
Address:	DAINTREE RIVER ESPLANADE
County (R) No:	R191
File Ref:	RES 19594

LAND DESCRIPTION

LOT 359 SURVEY PLAN 215752 AMENDED on 23/06/2010
Local Government: DOUGLAS

Area: 0.594300 Ha. (SURVEYED)

TRUSTEES

DOUGLAS SHIRE COUNCIL GAZETTED ON 10/10/1981 PAGE 575

EASEMENTS AND ENCUMBRANCES

NIL

ADMINISTRATIVE ADVICES

NIL

UNREGISTERED DEALINGS

NIL

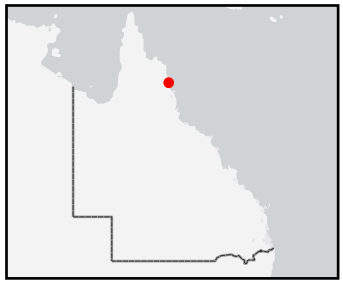
** End of Current Reserve Search **

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Requested by: D-ENQ DYE & DURHAM (S)

Appendix D

Planning Context Mapping & Planning Scheme Property Reports





N

Scale: 1:2,000

0 20 40 60 80

Metres

Date: 01/09/2025

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State Planning Policy mapping layers - consolidated list for all selected Lot Plans

(Note: Please refer to following pages for State Interests listed for each selected Lot Plan)

BIODIVERSITY
- MSES - Wildlife habitat (endangered or vulnerable)
- MSES - Wildlife habitat (special least concern animal)
- MSES - Marine park (highly protected areas)
- MSES - Regulated vegetation (category B)
- MSES - Regulated vegetation (category R)
- MSES - Regulated vegetation (essential habitat)

COASTAL ENVIRONMENT
- Coastal management district

NATURAL HAZARDS RISK AND RESILIENCE
- Erosion prone area
- High storm tide inundation area
- Medium storm tide inundation area
- Flood hazard area - Level 1 - Queensland floodplain assessment overlay
- Flood hazard area - local government flood mapping area

AGRICULTURE
- Agricultural land classification - class A and B

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State Planning Policy mapping layers for selected

Lot Plan: 1RP804943 (Area: 2043 m²)
AGRICULTURE
- Agricultural land classification - class A and B
BIODIVERSITY
- MSES - Regulated vegetation (category R)
COASTAL ENVIRONMENT
- Coastal management district
NATURAL HAZARDS RISK AND RESILIENCE
- Flood hazard area - local government flood mapping area
- Medium storm tide inundation area
- Flood hazard area - Level 1 - Queensland floodplain assessment overlay
- High storm tide inundation area
- Erosion prone area

Lot Plan: 359SP215752 (Area: 5943 m²)
AGRICULTURE
- Agricultural land classification - class A and B
BIODIVERSITY
- MSES - Regulated vegetation (category B)
- MSES - Regulated vegetation (essential habitat)
- MSES - Wildlife habitat (endangered or vulnerable)
- MSES - Wildlife habitat (special least concern animal)
- MSES - Regulated vegetation (category R)
COASTAL ENVIRONMENT
- Coastal management district
NATURAL HAZARDS RISK AND RESILIENCE
- Flood hazard area - local government flood mapping area
- Medium storm tide inundation area
- Flood hazard area - Level 1 - Queensland floodplain assessment overlay
- High storm tide inundation area
- Erosion prone area

Lot Plan: 4SP126928 (Area: 6609 m²)
AGRICULTURE
- Agricultural land classification - class A and B
BIODIVERSITY
- MSES - Regulated vegetation (category B)
- MSES - Regulated vegetation (essential habitat)
- MSES - Wildlife habitat (endangered or vulnerable)
- MSES - Wildlife habitat (special least concern animal)
- MSES - Marine park (highly protected areas)
- MSES - Regulated vegetation (category R)
COASTAL ENVIRONMENT
- Coastal management district
NATURAL HAZARDS RISK AND RESILIENCE
- Flood hazard area - local government flood mapping area
- Medium storm tide inundation area
- Flood hazard area - Level 1 - Queensland floodplain assessment overlay
- High storm tide inundation area

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- Erosion prone area

Lot Plan: 2RP865069 (Area: 2000 m²)
AGRICULTURE
- Agricultural land classification - class A and B
BIODIVERSITY
- MSES - Regulated vegetation (category R)
COASTAL ENVIRONMENT
- Coastal management district
NATURAL HAZARDS RISK AND RESILIENCE
- Flood hazard area - local government flood mapping area
- Medium storm tide inundation area
- Flood hazard area - Level 1 - Queensland floodplain assessment overlay
- High storm tide inundation area
- Erosion prone area

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Matters of Interest for all selected Lot Plans

Coastal management district
Coastal area - erosion prone area
Coastal area - medium storm tide inundation area
Coastal area - high storm tide inundation area
Major (tidal)
Regulated vegetation management map (Category A and B extract)

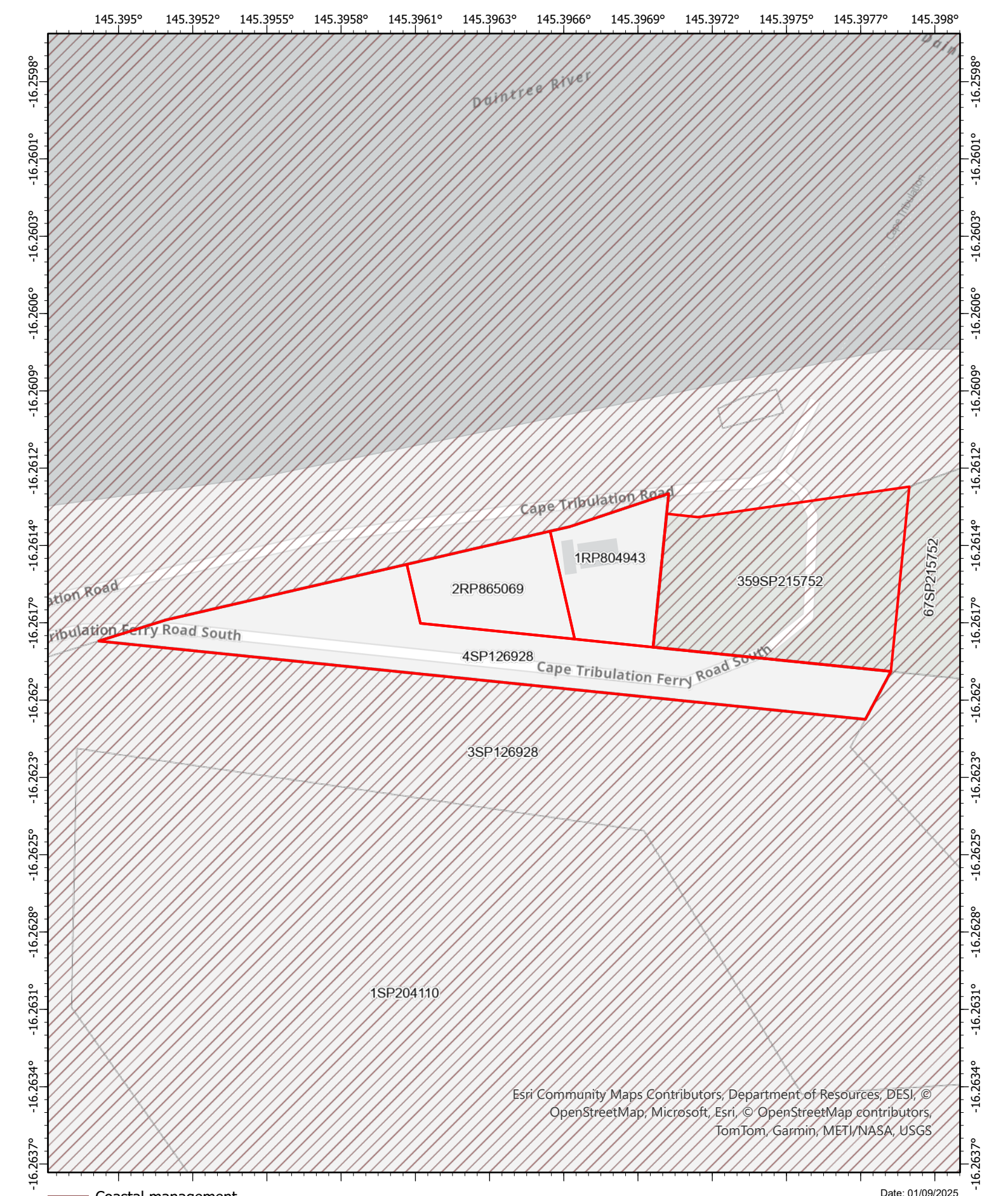
Matters of Interest by Lot Plan

Lot Plan: 1RP804943 (Area: 2043 m²)
Coastal management district
Coastal area - erosion prone area
Coastal area - medium storm tide inundation area
Coastal area - high storm tide inundation area

Lot Plan: 359SP215752 (Area: 5943 m²)
Coastal management district
Coastal area - erosion prone area
Coastal area - medium storm tide inundation area
Coastal area - high storm tide inundation area
Major (tidal)
Regulated vegetation management map (Category A and B extract)

Lot Plan: 2RP865069 (Area: 2000 m²)
Coastal management district
Coastal area - erosion prone area
Coastal area - medium storm tide inundation area
Coastal area - high storm tide inundation area

Lot Plan: 4SP126928 (Area: 6609 m²)
Coastal management district
Coastal area - erosion prone area
Coastal area - medium storm tide inundation area
Coastal area - high storm tide inundation area
Major (tidal)
Regulated vegetation management map (Category A and B extract)



Coastal management district

Date: 01/09/2025

N

Scale: 1:2,000

0 20 40 60 80

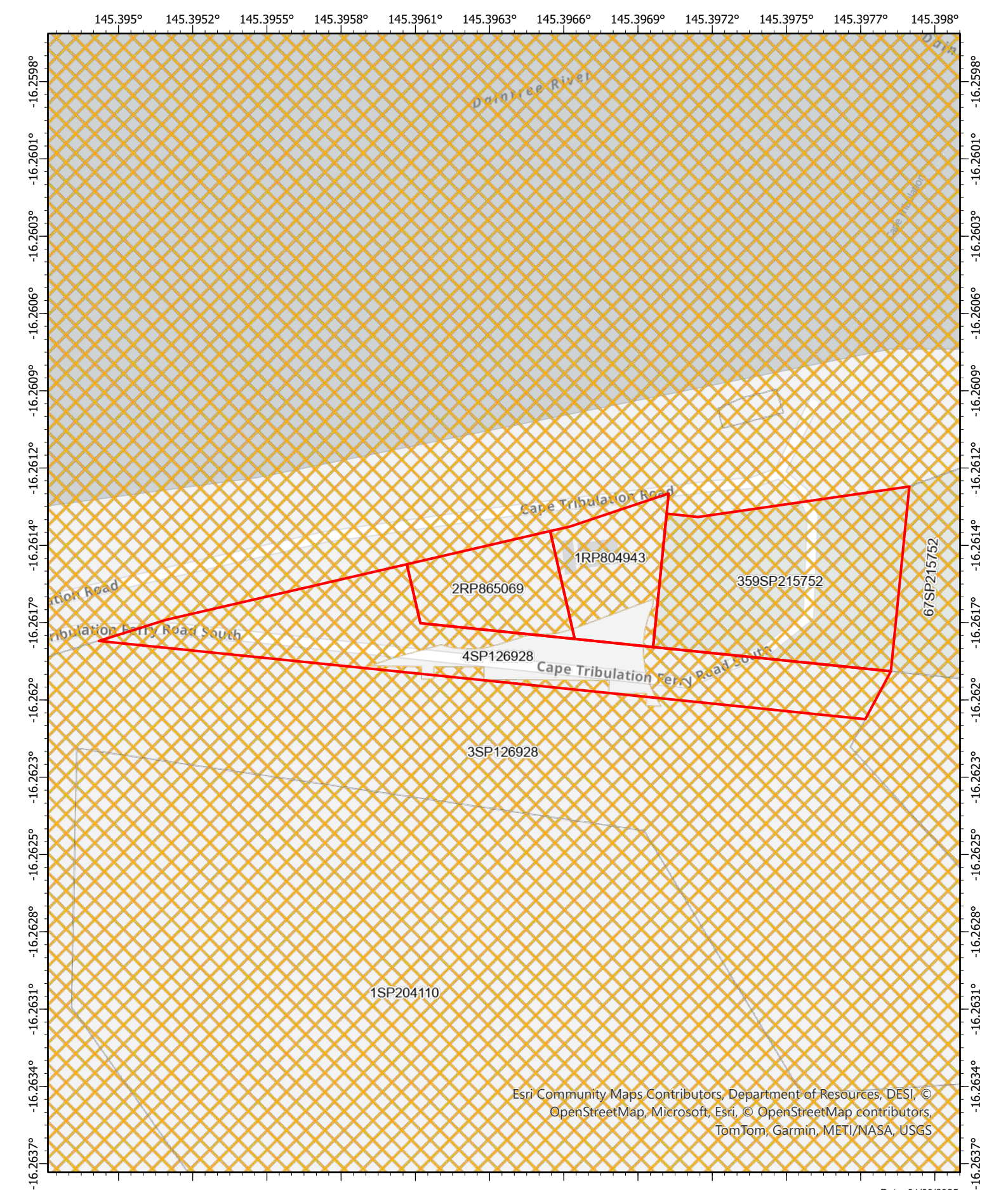
Metres

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Coastal area - erosion prone area

Date: 01/09/2025

N

Scale: 1:2,000

0 20 40 60 80

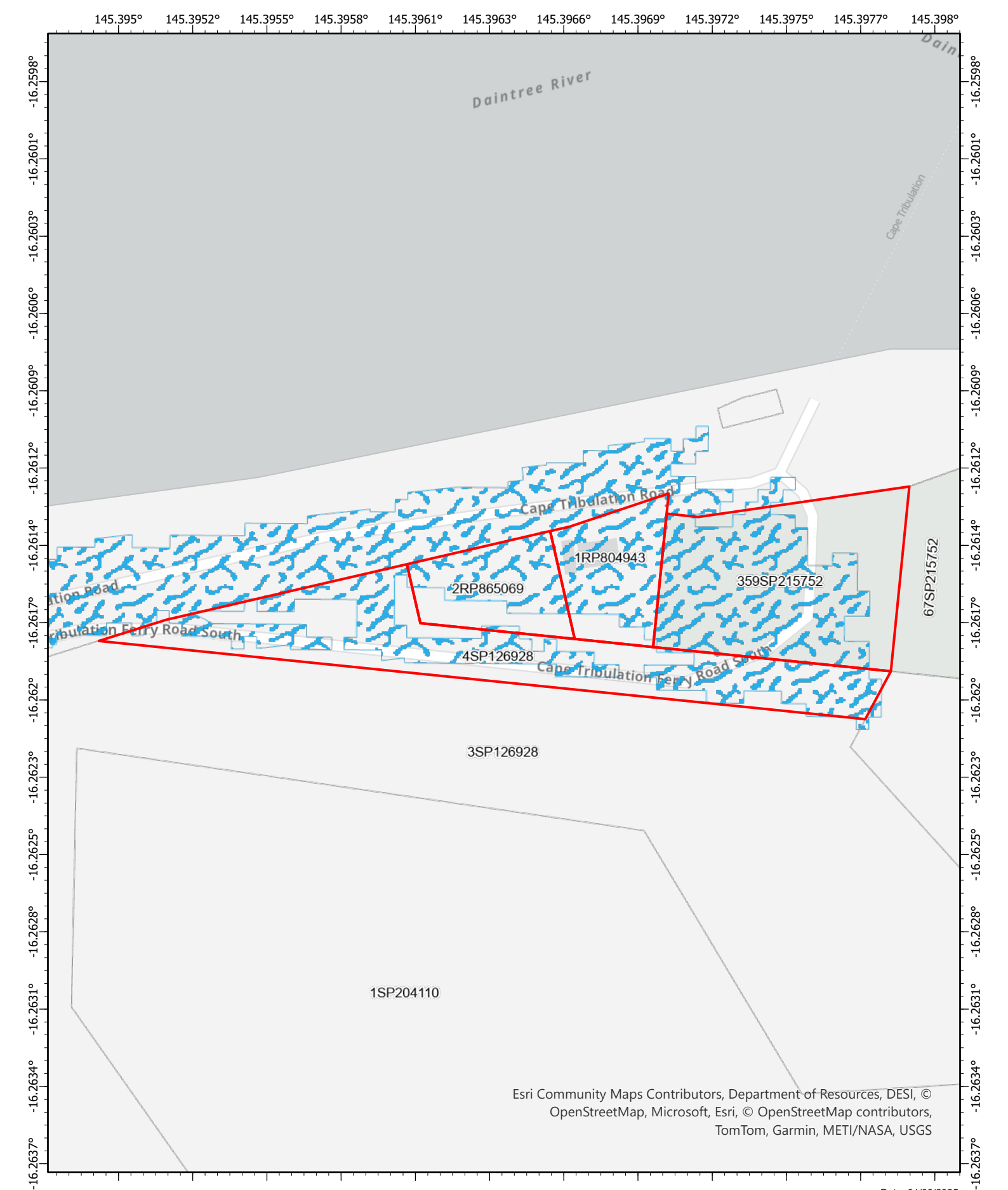
Metres

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Coastal area - medium storm tide inundation area

Date: 01/09/2025

N

Scale: 1:2,000

0 20 40 60 80

Metres

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Coastal area - high storm tide inundation area

Date: 01/09/2025

N

Scale: 1:2,000

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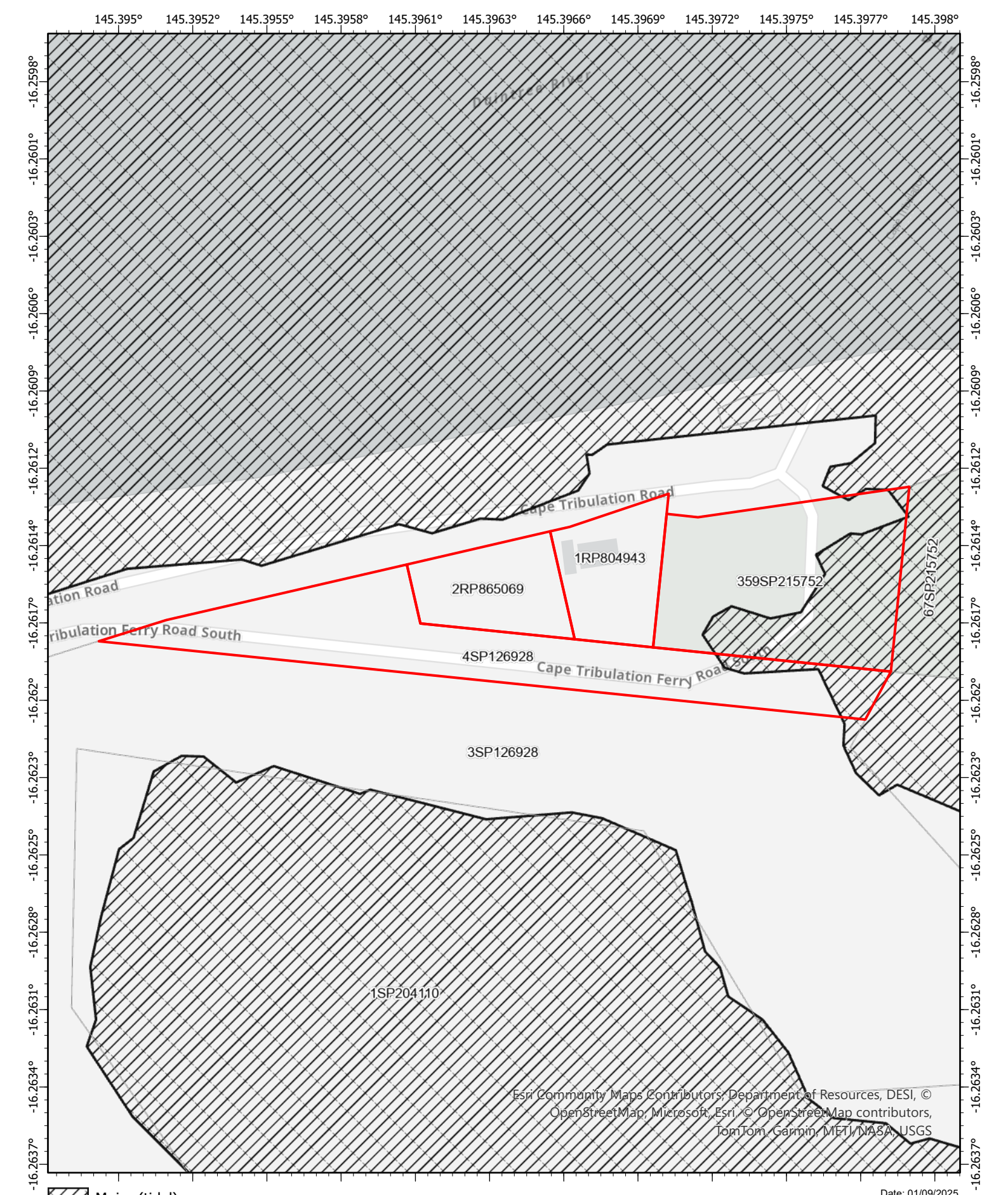
Metres

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Major (tidal)

Date: 01/09/2025

N

Scale: 1:2,000

0 20 40 60 80

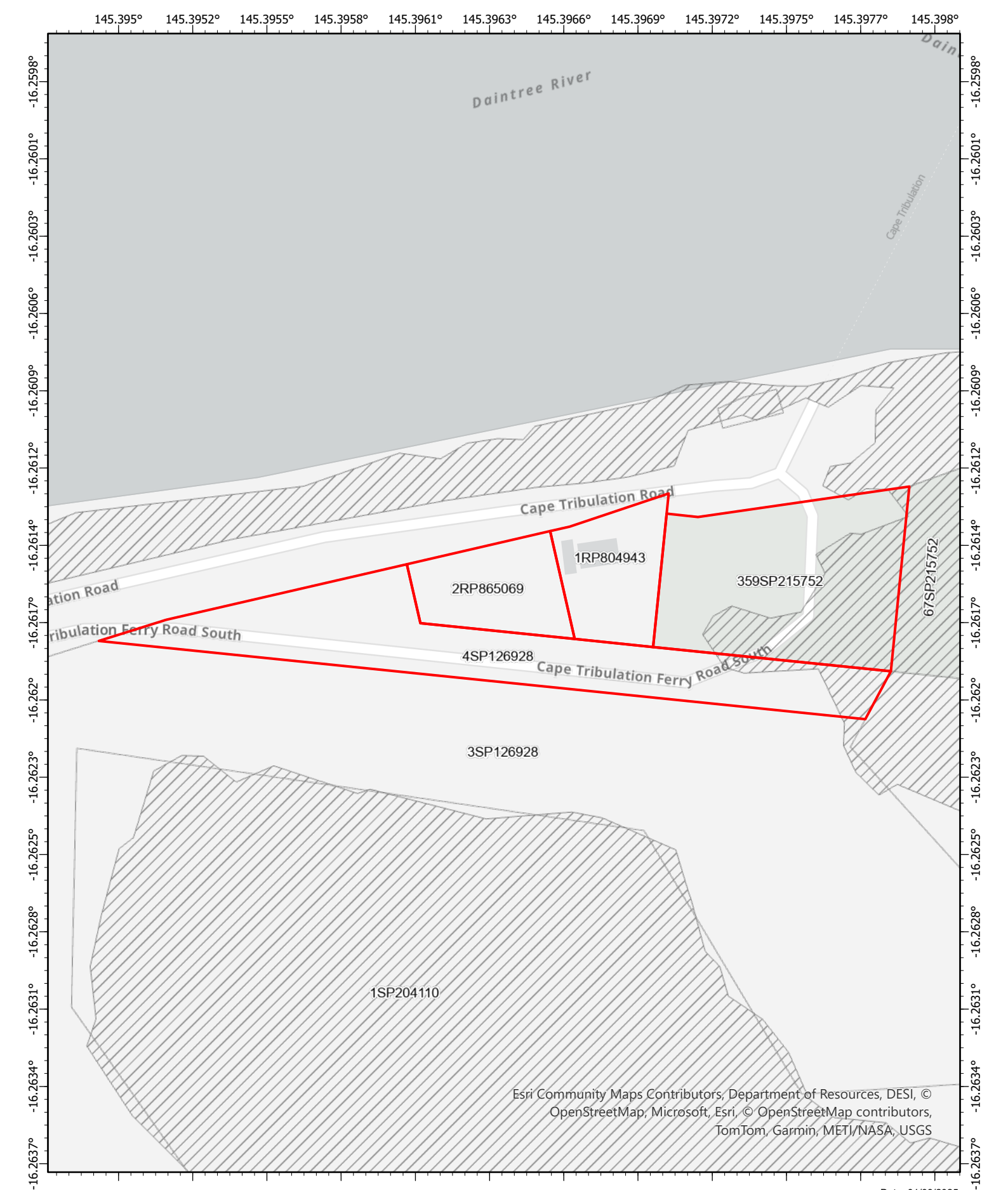
Metres

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Regulated vegetation management map (Category A and B extract)

Category B on the regulated vegetation management map

Date: 01/09/2025

N

Scale: 1:2,000

0 20 40 60 80

Metres

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2018 Douglas Shire Council Planning Scheme Property Report

The following report has been automatically generated to provide a general indication of development related information applying to the premise.

For more information and to determine if the mapping layers are applicable, refer to the 2018 Douglas Shire Council Planning Scheme. This report is not intended to replace the need for carrying out a detailed assessment of Council and State controls or the need to seek your own professional advice on any town planning instrument, local law or other controls that may impact on the existing or intended use of the premise mentioned in this report. For further information please contact Council by phone: 07 4099 9444 or 1800 026 318 or email enquiries@douglas.qld.gov.au.

Visit Council's website to apply for an official property search or certificate, or contact the Department of Natural Resources, Mines and Energy to undertake a title search to ascertain how easements may affect a premise.

Property Information

Property Address	Ferry House Ferry House 362 Cape Tribulation Road LOWER DAINTREE
Lot Plan	1RP804943 (Freehold - 2043m^2)



Selected Property | Easements | Property

Douglas Shire Planning Scheme 2018 version 1.0

The table below provides a summary of the Zones and Overlays that apply to the selected property.

Douglas Shire Planning Scheme 2018 version 1.0

The table below provides a summary of the Zones and Overlays that apply to the selected property.

Zoning	**Applicable Zones** Conservation Rural	**More Information** • View Section 6.2.3 Conservation Zone Code • View Section 6.2.3 Conservation Zone Compliance table • View Section 6.2.3 Conservation Zone Assessment table • View Section 6.2.10 Rural Zone Code • View Section 6.2.10 Rural Zone Compliance table • View Section 6.2.10 Rural Zone Assessment table
Acid Sulfate Soils	**Applicable Precinct or Area** Acid Sulfate Soils (< 5m AHD)	**More Information** • View Section 8.2.1 Acid Sulfate Soils Overlay Code • View Section 8.2.1 Acid Sulfate Soils Overlay Compliance table
Coastal Processes	**Applicable Precinct or Area** Coastal Management District Erosion Prone Area	**More Information** • View Section 8.2.3 Coastal Environment Overlay Code • View Section 8.2.3 Coastal Environment Overlay Compliance table
Flood Storm	**Applicable Precinct or Area** Medium Storm Tide Hazard High Storm Tide Hazard Floodplain Assessment Overlay (Daintree River)	**More Information** • View Section 8.2.4 Flood and Storm Tide Hazard Overlay Code • View Section 8.2.4 Flood and Storm Tide Hazard Overlay Compliance table
Landscape Values	**Scenic Buffer Area** Gateway Scenic route Scenic route buffer	**More Information** • View Section 8.2.6 Landscape Values Overlay Code • View Section 8.2.6 Landscape Values Overlay Compliance table
Natural Areas	**Applicable Precinct or Area** MSES - Wildlife Habitat MSES - Regulated Vegetation MSES - Marine Park	**More Information** • View Section 8.2.7 Natural Areas Overlay Code • View Section 8.2.7 Natural Areas Overlay Compliance table
Places Of Significance	**Applicable Precinct or Area** Place of Local Significance (Daintree Ferry Landing and Crossing Site)	**More Information** • View Section 8.2.8 Places of Significance Overlay Code • View Section 8.2.8 Places of Significance Overlay Compliance table
Transport Pedestrian Cycle	**Applicable Precinct or Area** Iconic Recreation Route	**More Information** • View Section 8.2.10 Transport Network Overlay Code • View Section 8.2.10 Transport Network Overlay Compliance table
Transport Road Hierarcy	**Applicable Precinct or Area** Sub Arterial Road	**More Information** • View Section 8.2.10 Transport Network Overlay Code • View Section 8.2.10 Transport Network Overlay Compliance table

Zoning

Applicable Zones

Conservation

Rural

More Information

- View Section 6.2.3 Conservation Zone Code
- View Section 6.2.3 Conservation Zone Compliance table
- View Section 6.2.3 Conservation Zone Assessment table
- View Section 6.2.10 Rural Zone Code
- View Section 6.2.10 Rural Zone Compliance table
- View Section 6.2.10 Rural Zone Assessment table



Selected Property

Property

Zoning

- Centre
- Community Facilities
- Conservation
- Environmental Management
- Industry
- Low Density Residential
- Low-medium Density Residential
- Medium Density Residential
- Recreation and Open Space
- Rural
- Rural Residential
- Special Purpose
- Tourism
- Tourist Accommodation

Acid Sulfate Soils

Applicable Precinct or Area

Acid Sulfate Soils (< 5m AHD)

More Information

- View Section 8.2.1 Acid Sulfate Soils Overlay Code
- View Section 8.2.1 Acid Sulfate Soils Overlay Compliance table



Selected Property

Property

Acid Sulfate Soils

Acid Sulfate Soils (< 5m AHD)

Acid Sulfate Soils (5-20m AHD)

all others

Coastal Processes

Applicable Precinct or Area
Coastal Management District
Erosion Prone Area

More Information
- View Section 8.2.3 Coastal Environment Overlay Code
- View Section 8.2.3 Coastal Environment Overlay Compliance table



Selected Property | Property | Coastal Management District | Erosion Prone Area

Flood Storm

Applicable Precinct or Area
Medium Storm Tide Hazard
High Storm Tide Hazard
Floodplain Assessment Overlay (Daintree River)

More Information
- View Section 8.2.4 Flood and Storm Tide Hazard Overlay Code
- View Section 8.2.4 Flood and Storm Tide Hazard Overlay Compliance table



Selected Property | Property | Medium Storm Tide Hazard | High Storm Tide Hazard
100 Year ARI - Mossman Port Douglas and Daintree Flood Studies | Floodplain Assessment Overlay

Landscape Values

Scenic Buffer Area

Gateway

Scenic route

Scenic route buffer

More Information

- View Section 8.2.6 Landscape Values Overlay Code
- View Section 8.2.6 Landscape Values Overlay Compliance table



Selected Property

Property

Scenic Buffer Area

Gateway

Lookout

Scenic route

Scenic route buffer

View corridor

all others

Landscape Values

Coastal scenery

High landscape values

Medium Landscape Value

all others

Natural Areas

Applicable Precinct or Area

MSES - Wildlife Habitat
MSES - Regulated Vegetation
MSES - Marine Park

More Information

- View Section 8.2.7 Natural Areas Overlay Code
- View Section 8.2.7 Natural Areas Overlay Compliance table



Selected Property
Property
MSES - Regulated Vegetation (Intersecting a Watercourse)
MSES - High Ecological Value Waters (Watercourse)
MSES - Wildlife Habitat
MSES - Regulated Vegetation
MSES - Protected Area
MSES - Marine Park
MSES - Legally Secured Offset Area
MSES - High Ecological Value Waters (Wetland)
MSES - High Ecological Significance Wetlands

Places Of Significance

Applicable Precinct or Area

Place of Local Significance (Daintree Ferry Landing and Crossing Site)

More Information

- View Section 8.2.8 Places of Significance Overlay Code
- View Section 8.2.8 Places of Significance Overlay Compliance table



Selected Property

Property

Places_of_State_Significance_p

State Heritage Place

Premises adjoining State heritage place

Transport Pedestrian Cycle

Applicable Precinct or Area
Iconic Recreation Route

More Information
- View Section 8.2.10 Transport Network Overlay Code
- View Section 8.2.10 Transport Network Overlay Compliance table



Selected Property

Property

Pedestrian and Cycle Network

District Route
Future Principal Route
Iconic Recreation Route
Neighbourhood Route
Principal Route
Strategic Investigation Route
all others

Transport Road Hierarcy

Applicable Precinct or Area
Sub Arterial Road

More Information

- View Section 8.2.10 Transport Network Overlay Code
- View Section 8.2.10 Transport Network Overlay Compliance table



Selected Property

Property

Road Hierarchy

Access Road
Arterial Road
Collector Road
Industrial Road
Major Rural Road
Minor Rural Road
Sub Arterial Road
Unformed Road
all others

Major Transport Corridor Buffer Area

Disclaimer

This report is not a substitute for a Planning and Development Certificate and should not be relied upon where the reliance may result in loss, damage or injury. While every effort is taken to ensure the information in this report is accurate and up to date, Douglas Shire Council makes no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and disclaims all responsibility and all liability (including without limitation, liability in negligence) for all expenses, losses, damages (including indirect or consequential damage) and costs that may occur as a result of the report being inaccurate or incomplete in any way or for any reason.

2018 Douglas Shire Council Planning Scheme Property Report

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For more information and to determine if the mapping layers are applicable, refer to the 2018 Douglas Shire Council Planning Scheme. This report is not intended to replace the need for carrying out a detailed assessment of Council and State controls or the need to seek your own professional advice on any town planning instrument, local law or other controls that may impact on the existing or intended use of the premise mentioned in this report. For further information please contact Council by phone: 07 4099 9444 or 1800 026 318 or email enquiries@douglas.qld.gov.au.

Visit Council's website to apply for an official property search or certificate, or contact the Department of Natural Resources, Mines and Energy to undertake a title search to ascertain how easements may affect a premise.

Property Information

Property Address

Lot Plan 2RP865069 (Freehold - 2000m^2)



Selected Property | Easements | Property

Douglas Shire Planning Scheme 2018 version 1.0

The table below provides a summary of the Zones and Overlays that apply to the selected property.

Zoning	Applicable Zone	More Information
	Rural	• View Section 6.2.10 Rural Zone Code • View Section 6.2.10 Rural Zone Compliance table • View Section 6.2.10 Rural Zone Assessment table

Douglas Shire Planning Scheme 2018 version 1.0

The table below provides a summary of the Zones and Overlays that apply to the selected property.

Acid Sulfate Soils	**Applicable Precinct or Area** Acid Sulfate Soils (< 5m AHD)	**More Information** • View Section 8.2.1 Acid Sulfate Soils Overlay Code • View Section 8.2.1 Acid Sulfate Soils Overlay Compliance table
Coastal Processes	**Applicable Precinct or Area** Coastal Management District Erosion Prone Area	**More Information** • View Section 8.2.3 Coastal Environment Overlay Code • View Section 8.2.3 Coastal Environment Overlay Compliance table
Flood Storm	**Applicable Precinct or Area** Medium Storm Tide Hazard High Storm Tide Hazard Floodplain Assessment Overlay (Daintree River)	**More Information** • View Section 8.2.4 Flood and Storm Tide Hazard Overlay Code • View Section 8.2.4 Flood and Storm Tide Hazard Overlay Compliance table
Landscape Values	**Scenic Buffer Area** Gateway Scenic route Scenic route buffer	**More Information** • View Section 8.2.6 Landscape Values Overlay Code • View Section 8.2.6 Landscape Values Overlay Compliance table
Natural Areas	**Applicable Precinct or Area** MSES - Wildlife Habitat MSES - Regulated Vegetation	**More Information** • View Section 8.2.7 Natural Areas Overlay Code • View Section 8.2.7 Natural Areas Overlay Compliance table
Transport Pedestrian Cycle	**Applicable Precinct or Area** Iconic Recreation Route	**More Information** • View Section 8.2.10 Transport Network Overlay Code • View Section 8.2.10 Transport Network Overlay Compliance table
Transport Road Hierarcy	**Applicable Precinct or Area** Sub Arterial Road	**More Information** • View Section 8.2.10 Transport Network Overlay Code • View Section 8.2.10 Transport Network Overlay Compliance table

Zoning

Applicable Zone
Rural

More Information
- View Section 6.2.10 Rural Zone Code
- View Section 6.2.10 Rural Zone Compliance table
- View Section 6.2.10 Rural Zone Assessment table



Selected Property

Property

Zoning

- Centre
- Community Facilities
- Conservation
- Environmental Management
- Industry
- Low Density Residential
- Low-medium Density Residential
- Medium Density Residential
- Recreation and Open Space
- Rural
- Rural Residential
- Special Purpose
- Tourism
- Tourist Accommodation

Acid Sulfate Soils

Applicable Precinct or Area
Acid Sulfate Soils (< 5m AHD)

More Information
- View Section 8.2.1 Acid Sulfate Soils Overlay Code
- View Section 8.2.1 Acid Sulfate Soils Overlay Compliance table



Selected Property | Property | **Acid Sulfate Soils**: Acid Sulfate Soils (< 5m AHD) | Acid Sulfate Soils (5-20m AHD) | all others

Coastal Processes

Applicable Precinct or Area
Coastal Management District
Erosion Prone Area

More Information
- View Section 8.2.3 Coastal Environment Overlay Code
- View Section 8.2.3 Coastal Environment Overlay Compliance table



Selected Property | Property | Coastal Management District | Erosion Prone Area

Flood Storm

Applicable Precinct or Area
Medium Storm Tide Hazard
High Storm Tide Hazard
Floodplain Assessment Overlay (Daintree River)

More Information
- View Section 8.2.4 Flood and Storm Tide Hazard Overlay Code
- View Section 8.2.4 Flood and Storm Tide Hazard Overlay Compliance table



Selected Property | Property | Medium Storm Tide Hazard | High Storm Tide Hazard
100 Year ARI - Mossman Port Douglas and Daintree Flood Studies | Floodplain Assessment Overlay

Landscape Values

Scenic Buffer Area
Gateway
Scenic route
Scenic route buffer

More Information
- View Section 8.2.6 Landscape Values Overlay Code
- View Section 8.2.6 Landscape Values Overlay Compliance table



Selected Property
Property

Scenic Buffer Area
Gateway
Lookout
Scenic route
Scenic route buffer
View corridor
all others

Landscape Values
Coastal scenery
High landscape values
Medium Landscape Value
all others

Natural Areas

Applicable Precinct or Area
MSES - Wildlife Habitat
MSES - Regulated Vegetation

More Information
- View Section 8.2.7 Natural Areas Overlay Code
- View Section 8.2.7 Natural Areas Overlay Compliance table



Selected Property
Property
MSES - Regulated Vegetation (Intersecting a Watercourse)
MSES - High Ecological Value Waters (Watercourse)
MSES - Wildlife Habitat
MSES - Regulated Vegetation
MSES - Protected Area
MSES - Marine Park
MSES - Legally Secured Offset Area
MSES - High Ecological Value Waters (Wetland)
MSES - High Ecological Significance Wetlands

Transport Pedestrian Cycle

Applicable Precinct or Area
Iconic Recreation Route

More Information
- View Section 8.2.10 Transport Network Overlay Code
- View Section 8.2.10 Transport Network Overlay Compliance table



Selected Property

Property

Pedestrian and Cycle Network

- District Route
- Principal Route
- Future Principal Route
- Strategic Investigation Route
- Iconic Recreation Route
- all others
- Neighbourhood Route

Transport Road Hierarcy

Applicable Precinct or Area
Sub Arterial Road

More Information
- View Section 8.2.10 Transport Network Overlay Code
- View Section 8.2.10 Transport Network Overlay Compliance table



Selected Property

Property

Road Hierarchy

Access Road
Arterial Road
Collector Road
Industrial Road
Major Rural Road
Minor Rural Road
Sub Arterial Road
Unformed Road
all others

Major Transport Corridor Buffer Area

Disclaimer

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2018 Douglas Shire Council Planning Scheme Property Report

The following report has been automatically generated to provide a general indication of development related information applying to the premise.

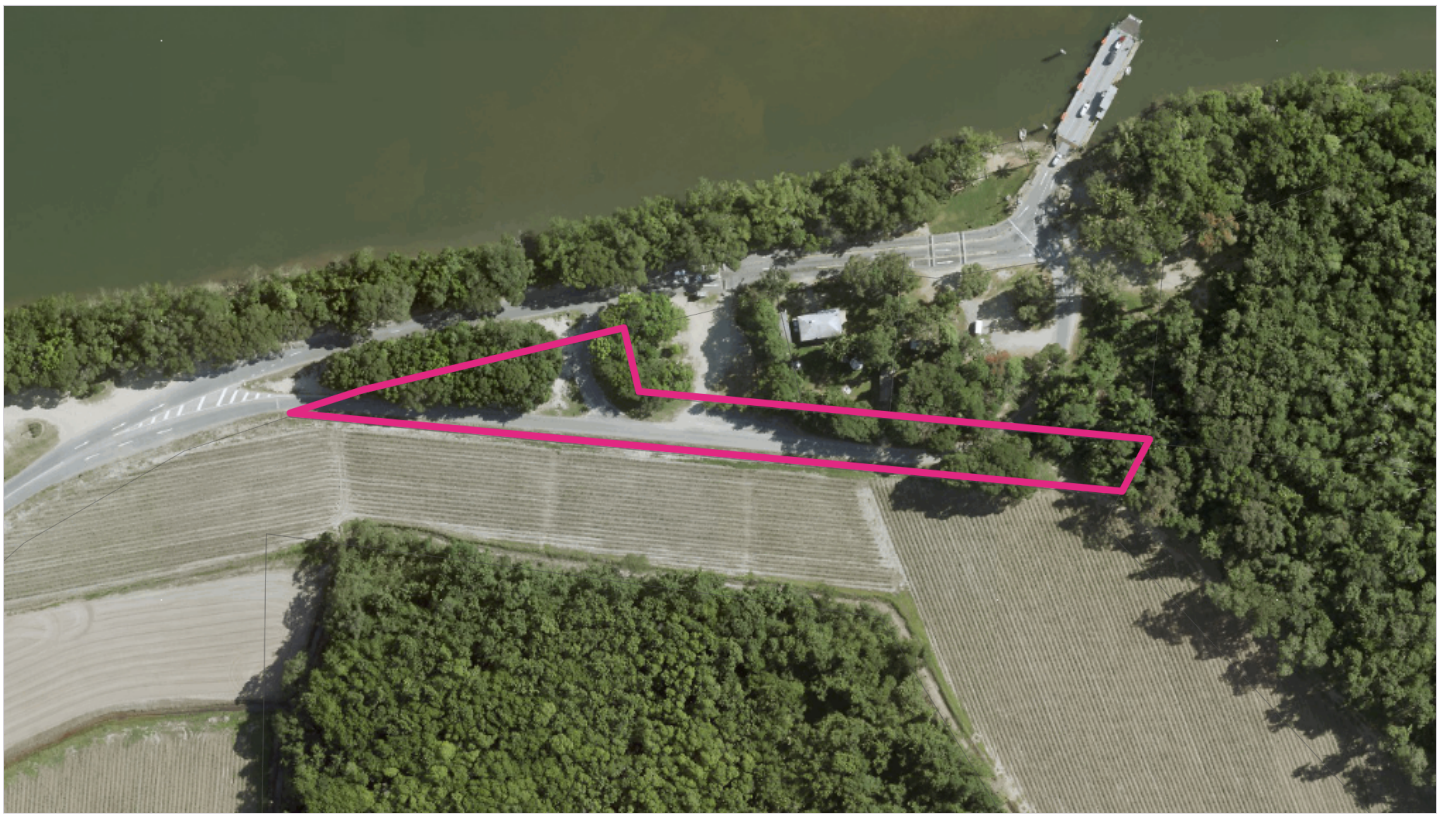
For more information and to determine if the mapping layers are applicable, refer to the 2018 Douglas Shire Council Planning Scheme. This report is not intended to replace the need for carrying out a detailed assessment of Council and State controls or the need to seek your own professional advice on any town planning instrument, local law or other controls that may impact on the existing or intended use of the premise mentioned in this report. For further information please contact Council by phone: 07 4099 9444 or 1800 026 318 or email enquiries@douglas.qld.gov.au.

Visit Council's website to apply for an official property search or certificate, or contact the Department of Natural Resources, Mines and Energy to undertake a title search to ascertain how easements may affect a premise.

Property Information

Property Address

Lot Plan 4SP126928 (Freehold - 6609m^2)



Selected Property | Easements | Property

Douglas Shire Planning Scheme 2018 version 1.0

The table below provides a summary of the Zones and Overlays that apply to the selected property.

Douglas Shire Planning Scheme 2018 version 1.0

The table below provides a summary of the Zones and Overlays that apply to the selected property.

Zoning	**Applicable Zones** Conservation Rural	**More Information** • View Section 6.2.3 Conservation Zone Code • View Section 6.2.3 Conservation Zone Compliance table • View Section 6.2.3 Conservation Zone Assessment table • View Section 6.2.10 Rural Zone Code • View Section 6.2.10 Rural Zone Compliance table • View Section 6.2.10 Rural Zone Assessment table
Acid Sulfate Soils	**Applicable Precinct or Area** Acid Sulfate Soils (< 5m AHD)	**More Information** • View Section 8.2.1 Acid Sulfate Soils Overlay Code • View Section 8.2.1 Acid Sulfate Soils Overlay Compliance table
Coastal Processes	**Applicable Precinct or Area** Coastal Management District Erosion Prone Area	**More Information** • View Section 8.2.3 Coastal Environment Overlay Code • View Section 8.2.3 Coastal Environment Overlay Compliance table
Flood Storm	**Applicable Precinct or Area** Medium Storm Tide Hazard High Storm Tide Hazard Floodplain Assessment Overlay (Daintree River)	**More Information** • View Section 8.2.4 Flood and Storm Tide Hazard Overlay Code • View Section 8.2.4 Flood and Storm Tide Hazard Overlay Compliance table
Landscape Values	**Scenic Buffer Area** Gateway Scenic route Scenic route buffer **Landscape Values** Medium Landscape Value	**More Information** • View Section 8.2.6 Landscape Values Overlay Code • View Section 8.2.6 Landscape Values Overlay Compliance table
Natural Areas	**Applicable Precinct or Area** MSES - Wildlife Habitat MSES - Regulated Vegetation MSES - Marine Park	**More Information** • View Section 8.2.7 Natural Areas Overlay Code • View Section 8.2.7 Natural Areas Overlay Compliance table
Transport Pedestrian Cycle	**Applicable Precinct or Area** Iconic Recreation Route	**More Information** • View Section 8.2.10 Transport Network Overlay Code • View Section 8.2.10 Transport Network Overlay Compliance table
Transport Road Hierarcy	**Applicable Precinct or Area** Sub Arterial Road	**More Information** • View Section 8.2.10 Transport Network Overlay Code • View Section 8.2.10 Transport Network Overlay Compliance table

Zoning

Applicable Zones

Conservation

Rural

More Information

- View Section 6.2.3 Conservation Zone Code
- View Section 6.2.3 Conservation Zone Compliance table
- View Section 6.2.3 Conservation Zone Assessment table
- View Section 6.2.10 Rural Zone Code
- View Section 6.2.10 Rural Zone Compliance table
- View Section 6.2.10 Rural Zone Assessment table



Selected Property

Property

Zoning

- Centre
- Community Facilities
- Conservation
- Environmental Management
- Industry
- Low Density Residential
- Low-medium Density Residential
- Medium Density Residential
- Recreation and Open Space
- Rural
- Rural Residential
- Special Purpose
- Tourism
- Tourist Accommodation

Acid Sulfate Soils

Applicable Precinct or Area

Acid Sulfate Soils (< 5m AHD)

More Information

- View Section 8.2.1 Acid Sulfate Soils Overlay Code
- View Section 8.2.1 Acid Sulfate Soils Overlay Compliance table



Selected Property

Property

Acid Sulfate Soils

Acid Sulfate Soils (< 5m AHD)

Acid Sulfate Soils (5-20m AHD)

all others

Coastal Processes

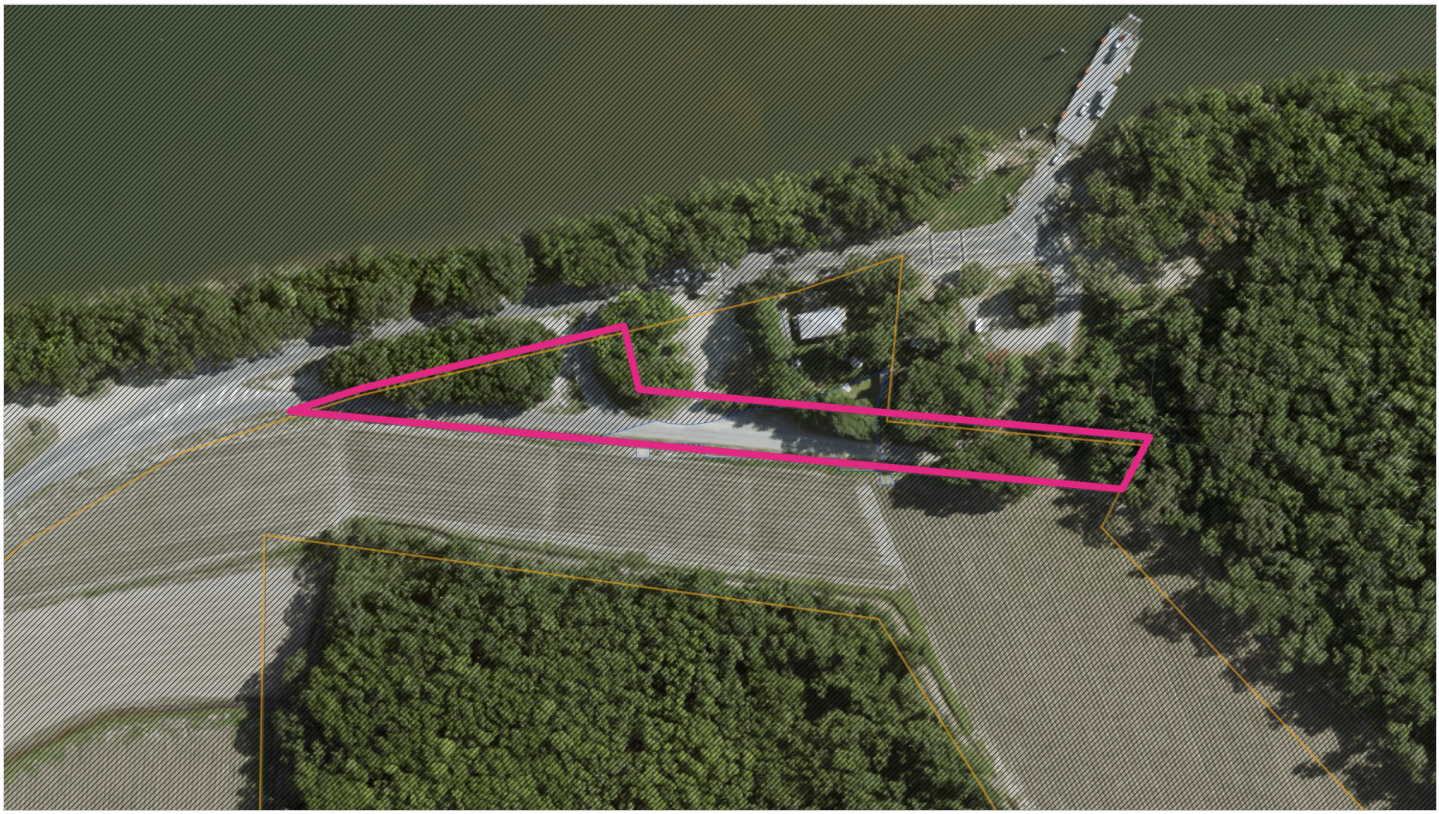
Applicable Precinct or Area

Coastal Management District

Erosion Prone Area

More Information

- View Section 8.2.3 Coastal Environment Overlay Code
- View Section 8.2.3 Coastal Environment Overlay Compliance table



Selected Property | Property | Coastal Management District | Erosion Prone Area

Flood Storm

Applicable Precinct or Area
Medium Storm Tide Hazard
High Storm Tide Hazard
Floodplain Assessment Overlay (Daintree River)

More Information
- View Section 8.2.4 Flood and Storm Tide Hazard Overlay Code
- View Section 8.2.4 Flood and Storm Tide Hazard Overlay Compliance table



Selected Property | Property | Medium Storm Tide Hazard | High Storm Tide Hazard
100 Year ARI - Mossman Port Douglas and Daintree Flood Studies | Floodplain Assessment Overlay

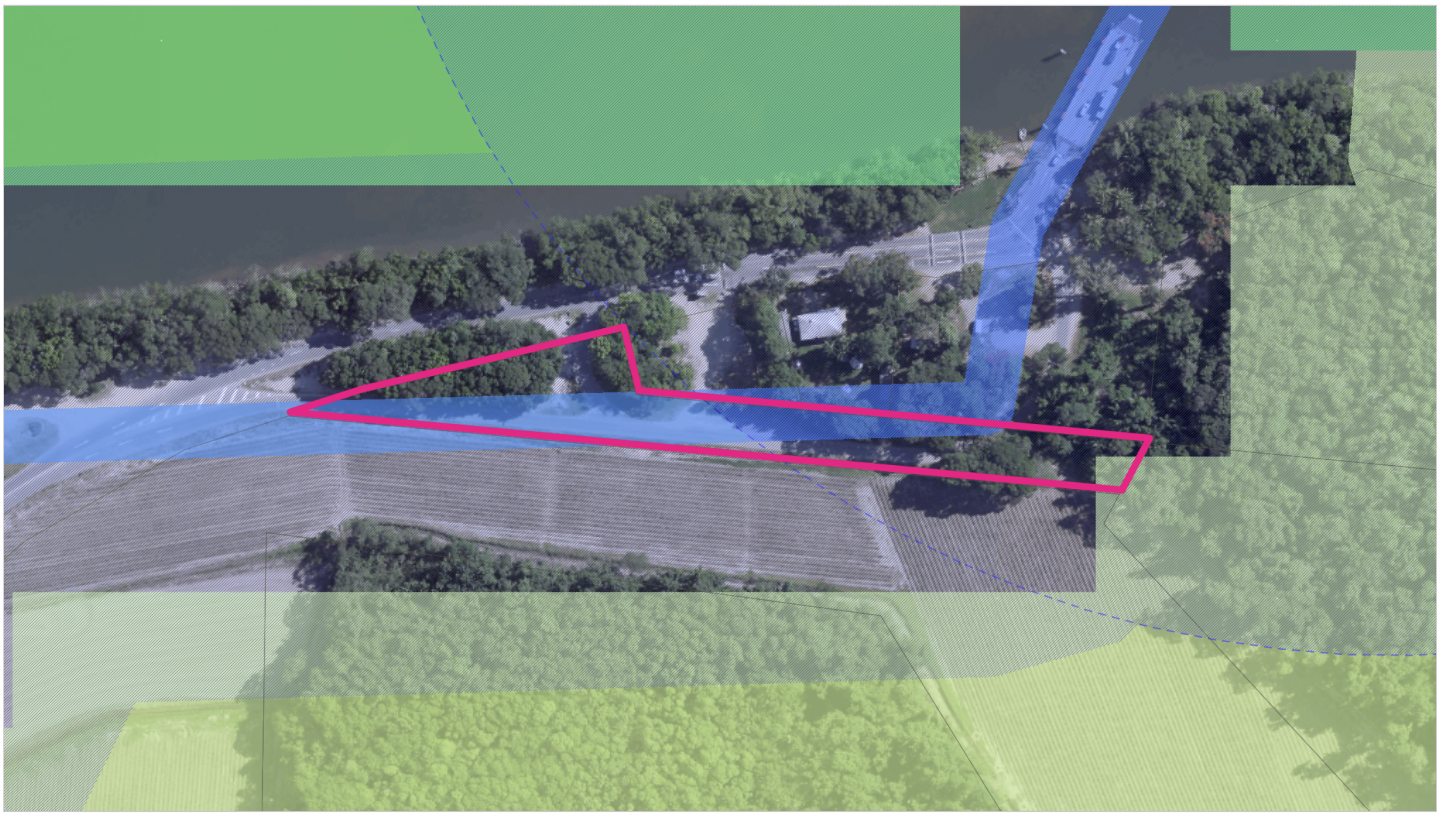
Landscape Values

Scenic Buffer Area
Gateway
Scenic route
Scenic route buffer

Landscape Values
Medium Landscape Value

More Information

- View Section 8.2.6 Landscape Values Overlay Code
- View Section 8.2.6 Landscape Values Overlay Compliance table



Selected Property

Property

Scenic Buffer Area
Gateway
Lookout
Scenic route
Scenic route buffer
View corridor
all others

Landscape Values
Coastal scenery
High landscape values
Medium Landscape Value
all others

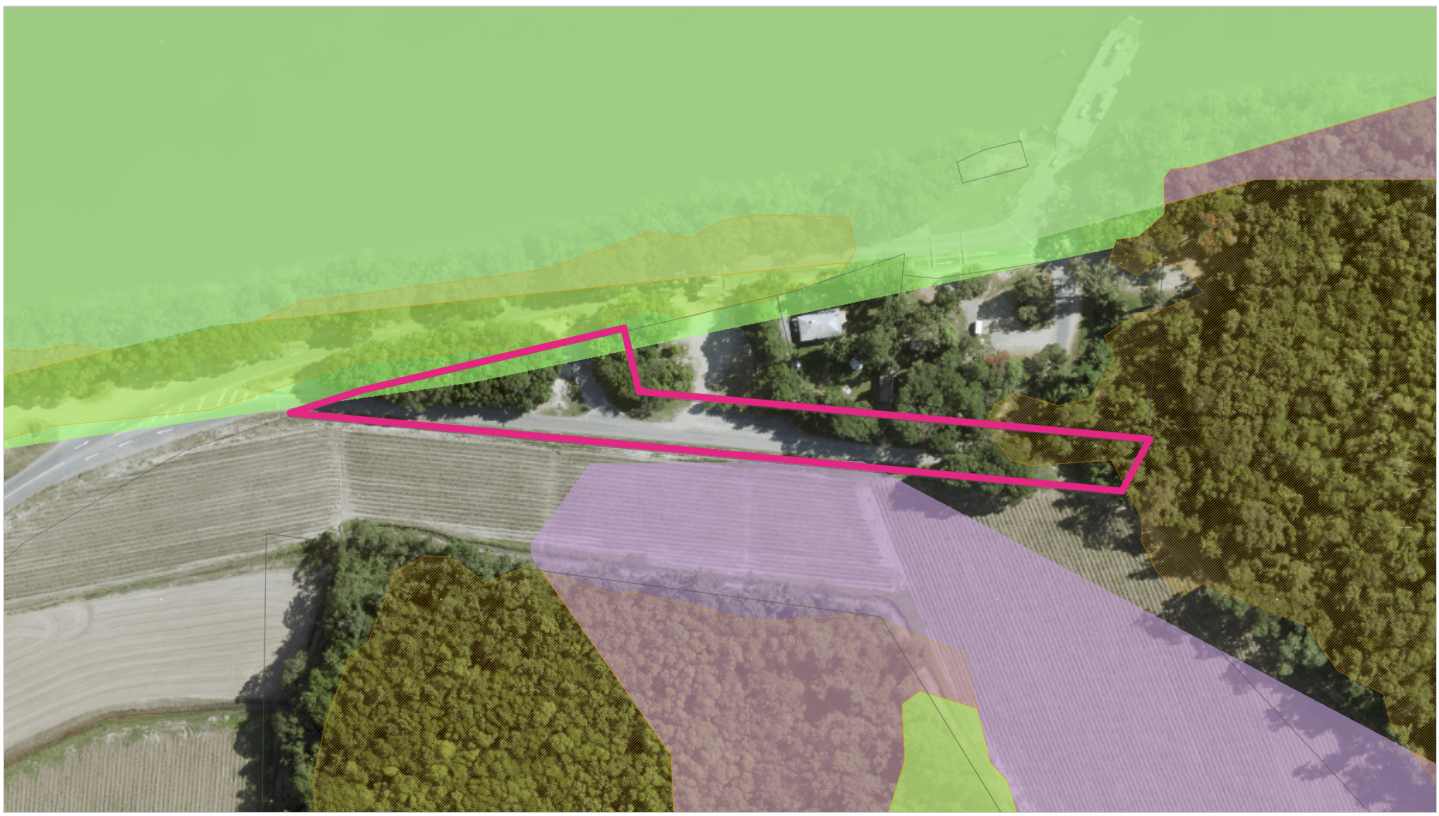
Natural Areas

Applicable Precinct or Area

MSES - Wildlife Habitat
MSES - Regulated Vegetation
MSES - Marine Park

More Information

- View Section 8.2.7 Natural Areas Overlay Code
- View Section 8.2.7 Natural Areas Overlay Compliance table



Selected Property | Property | MSES - Regulated Vegetation (Intersecting a Watercourse)

MSES - High Ecological Value Waters (Watercourse) | MSES - Wildlife Habitat | MSES - Regulated Vegetation

MSES - Protected Area | MSES - Marine Park | MSES - Legally Secured Offset Area

MSES - High Ecological Value Waters (Wetland) | MSES - High Ecological Significance Wetlands

Transport Pedestrian Cycle

Applicable Precinct or Area

Iconic Recreation Route

More Information

- View Section 8.2.10 Transport Network Overlay Code
- View Section 8.2.10 Transport Network Overlay Compliance table



Selected Property

Property

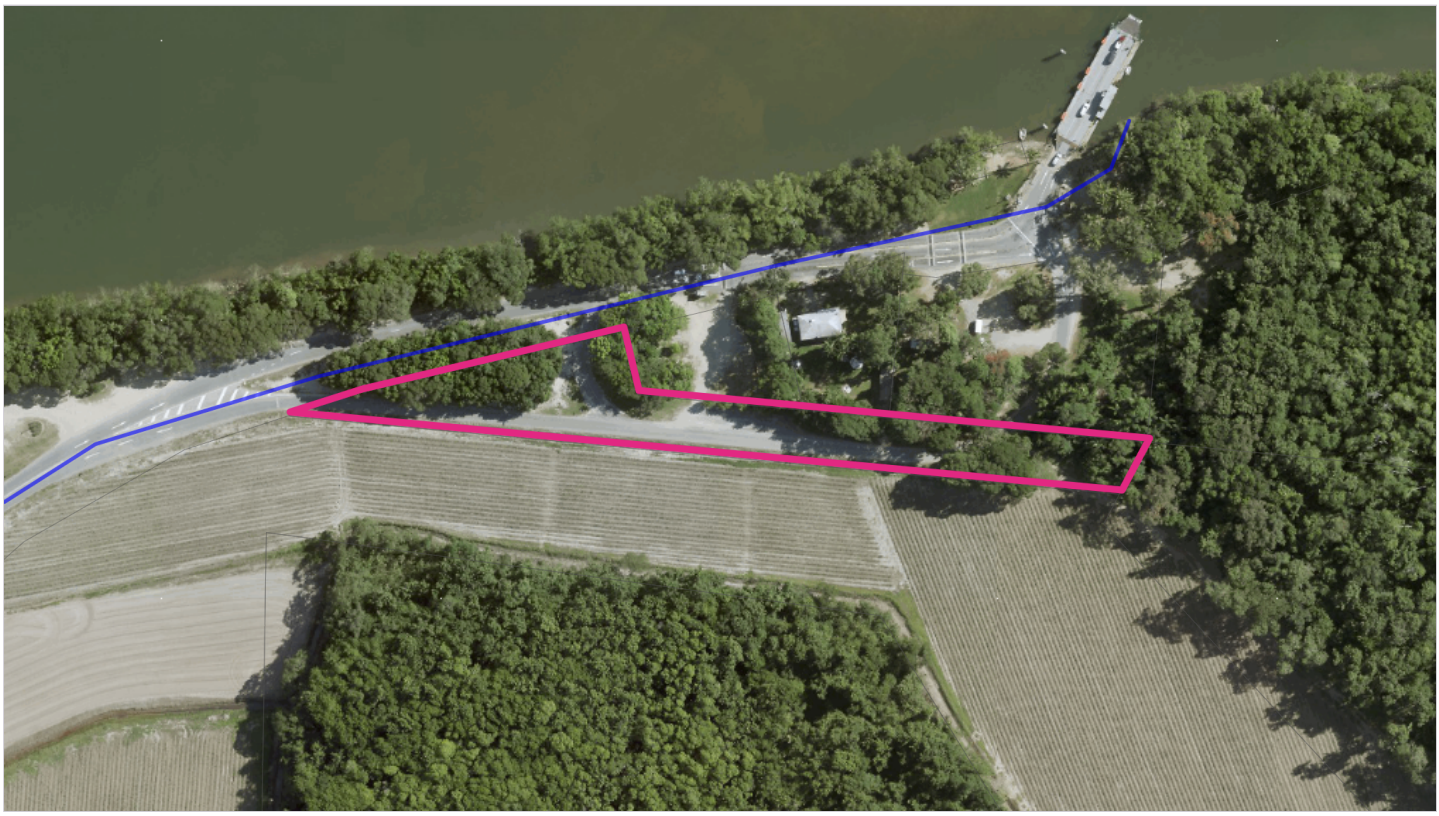
Pedestrian and Cycle Network

- District Route
- Principal Route
- Future Principal Route
- Strategic Investigation Route
- Iconic Recreation Route
- all others
- Neighbourhood Route

Transport Road Hierarcy

Applicable Precinct or Area
Sub Arterial Road

More Information
- View Section 8.2.10 Transport Network Overlay Code
- View Section 8.2.10 Transport Network Overlay Compliance table



Selected Property

Property

Road Hierarchy

Access Road
Arterial Road
Collector Road
Industrial Road
Major Rural Road
Minor Rural Road
Sub Arterial Road
Unformed Road
all others

Major Transport Corridor Buffer Area

Disclaimer

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2018 Douglas Shire Council Planning Scheme Property Report

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Visit Council's website to apply for an official property search or certificate, or contact the Department of Natural Resources, Mines and Energy to undertake a title search to ascertain how easements may affect a premise.

Property Information

Property Address	Toilet Toilet
Lot Plan	359SP215752 (Reserve - 5943m^2)



Selected Property | Easements | Property

Douglas Shire Planning Scheme 2018 version 1.0

The table below provides a summary of the Zones and Overlays that apply to the selected property.

Zoning	**Applicable Zone** Conservation	**More Information** • View Section 6.2.3 Conservation Zone Code • View Section 6.2.3 Conservation Zone Compliance table • View Section 6.2.3 Conservation Zone Assessment table

Douglas Shire Planning Scheme 2018 version 1.0

The table below provides a summary of the Zones and Overlays that apply to the selected property.

Acid Sulfate Soils	**Applicable Precinct or Area** Acid Sulfate Soils (< 5m AHD)	**More Information** • View Section 8.2.1 Acid Sulfate Soils Overlay Code • View Section 8.2.1 Acid Sulfate Soils Overlay Compliance table
Coastal Processes	**Applicable Precinct or Area** Coastal Management District Erosion Prone Area	**More Information** • View Section 8.2.3 Coastal Environment Overlay Code • View Section 8.2.3 Coastal Environment Overlay Compliance table
Flood Storm	**Applicable Precinct or Area** Medium Storm Tide Hazard High Storm Tide Hazard Floodplain Assessment Overlay (Daintree River)	**More Information** • View Section 8.2.4 Flood and Storm Tide Hazard Overlay Code • View Section 8.2.4 Flood and Storm Tide Hazard Overlay Compliance table
Landscape Values	**Scenic Buffer Area** Gateway Scenic route Scenic route buffer	**More Information** • View Section 8.2.6 Landscape Values Overlay Code • View Section 8.2.6 Landscape Values Overlay Compliance table
Natural Areas	**Applicable Precinct or Area** MSES - Wildlife Habitat MSES - Regulated Vegetation	**More Information** • View Section 8.2.7 Natural Areas Overlay Code • View Section 8.2.7 Natural Areas Overlay Compliance table
Places Of Significance	**Applicable Precinct or Area** Place of Local Significance (Daintree Ferry Landing and Crossing Site)	**More Information** • View Section 8.2.8 Places of Significance Overlay Code • View Section 8.2.8 Places of Significance Overlay Compliance table
Transport Pedestrian Cycle	**Applicable Precinct or Area** Iconic Recreation Route	**More Information** • View Section 8.2.10 Transport Network Overlay Code • View Section 8.2.10 Transport Network Overlay Compliance table
Transport Road Hierarcy	**Applicable Precinct or Area** Sub Arterial Road	**More Information** • View Section 8.2.10 Transport Network Overlay Code • View Section 8.2.10 Transport Network Overlay Compliance table

Zoning

Applicable Zone

Conservation

More Information

- View Section 6.2.3 Conservation Zone Code
- View Section 6.2.3 Conservation Zone Compliance table
- View Section 6.2.3 Conservation Zone Assessment table



Selected Property

Property

Zoning

- Centre
- Community Facilities
- Conservation
- Environmental Management
- Industry
- Low Density Residential
- Low-medium Density Residential
- Medium Density Residential
- Recreation and Open Space
- Rural
- Rural Residential
- Special Purpose
- Tourism
- Tourist Accommodation

Acid Sulfate Soils

Applicable Precinct or Area

Acid Sulfate Soils (< 5m AHD)

More Information

- View Section 8.2.1 Acid Sulfate Soils Overlay Code
- View Section 8.2.1 Acid Sulfate Soils Overlay Compliance table



Selected Property

Property

Acid Sulfate Soils

Acid Sulfate Soils (< 5m AHD)

Acid Sulfate Soils (5-20m AHD)

all others

Coastal Processes

Applicable Precinct or Area

Coastal Management District

Erosion Prone Area

More Information

- View Section 8.2.3 Coastal Environment Overlay Code
- View Section 8.2.3 Coastal Environment Overlay Compliance table



Selected Property	Property	Coastal Management District	Erosion Prone Area

Flood Storm

Applicable Precinct or Area

Medium Storm Tide Hazard
High Storm Tide Hazard
Floodplain Assessment Overlay (Daintree River)

More Information

- View Section 8.2.4 Flood and Storm Tide Hazard Overlay Code
- View Section 8.2.4 Flood and Storm Tide Hazard Overlay Compliance table



Selected Property | Property | Medium Storm Tide Hazard | High Storm Tide Hazard

100 Year ARI - Mossman Port Douglas and Daintree Flood Studies | Floodplain Assessment Overlay

Landscape Values

Scenic Buffer Area
Gateway
Scenic route
Scenic route buffer

More Information
- View Section 8.2.6 Landscape Values Overlay Code
- View Section 8.2.6 Landscape Values Overlay Compliance table



Selected Property
Property

Scenic Buffer Area
Gateway
Lookout
Scenic route
Scenic route buffer
View corridor
all others

Landscape Values
Coastal scenery
High landscape values
Medium Landscape Value
all others

Natural Areas

Applicable Precinct or Area

MSES - Wildlife Habitat

MSES - Regulated Vegetation

More Information

- View Section 8.2.7 Natural Areas Overlay Code
- View Section 8.2.7 Natural Areas Overlay Compliance table



Selected Property

Property

MSES - Regulated Vegetation (Intersecting a Watercourse)

MSES - High Ecological Value Waters (Watercourse)

MSES - Wildlife Habitat

MSES - Regulated Vegetation

MSES - Protected Area

MSES - Marine Park

MSES - Legally Secured Offset Area

MSES - High Ecological Value Waters (Wetland)

MSES - High Ecological Significance Wetlands

Places Of Significance

Applicable Precinct or Area

Place of Local Significance (Daintree Ferry Landing and Crossing Site)

More Information

- View Section 8.2.8 Places of Significance Overlay Code
- View Section 8.2.8 Places of Significance Overlay Compliance table



Selected Property

Property

Places_of_State_Significance_p

State Heritage Place

Premises adjoining State heritage place

Transport Pedestrian Cycle

Applicable Precinct or Area

Iconic Recreation Route

More Information

- View Section 8.2.10 Transport Network Overlay Code
- View Section 8.2.10 Transport Network Overlay Compliance table



Selected Property

Property

Pedestrian and Cycle Network

- District Route
- Principal Route
- Future Principal Route
- Strategic Investigation Route
- Iconic Recreation Route
- all others
- Neighbourhood Route

Transport Road Hierarcy

Applicable Precinct or Area
Sub Arterial Road

More Information

- View Section 8.2.10 Transport Network Overlay Code
- View Section 8.2.10 Transport Network Overlay Compliance table



Selected Property

Property

Road Hierarchy

Access Road
Arterial Road
Collector Road
Industrial Road
Major Rural Road
Minor Rural Road
Sub Arterial Road
Unformed Road
all others

Major Transport Corridor Buffer Area

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Appendix E

Relevant Approvals

Department of Environment and Heritage Protection

DOUGLAS SHIRE COUNCIL
Received
File Name EH/APP/ ERA
Document No
16 JAN 2014
Attention EP
Information

Permit[1]

Environmental Protection Act 1994

Environmental authority EPPR01803613

This environmental authority is issued by the administering authority under Chapter 5 of the Environmental Protection Act 1994.

Permit[1] number: EPPR01803613

Environmental authority EPPR01803613 takes effect on 1 January 2014.

The first annual fee is payable within 20 business days of the anniversary date. The anniversary date of this environmental authority is the 12 November each year. An annual return and the payment of the annual fee which is currently $2,428.80 will be due each year on this day.

Environmental authority holder(s)

Name	Registered address
Douglas Shire Council	64-66 Front Street Mossman QLD 4870

Environmentally relevant activity and location details

Environmentally relevant activity(ies)	Location(s)
ERA 16(1a) Dredging >1000t but <10000t per year	Lot 3 on Plan SP126928 Cape Tribulation Road, Daintree QLD 4873
ERA 57(2a) Regulated Waste Transport (other than tyres) in 1 – 5 vehicles	This activity is a mobile and temporary activity under the *Environmental Protection Act 1994.*

Additional information for applicants

Environmentally relevant activities:

The description of any environmentally relevant activity (ERA) for which an environmental authority is issued is a restatement of the ERA as defined by legislation at the time the approval is issued. Where there is any inconsistency between that description of an ERA and the conditions stated by an environmental authority as to the scale, intensity or manner of carrying out an ERA, then the conditions prevail to the extent of the inconsistency.

An environmental authority authorises the carrying out of an ERA and does not authorise any environmental harm unless a condition stated by the authority specifically authorises environmental harm.

[1] Permit includes licences, approvals, permits, authorisations, certificates, sanctions or equivalent/similar as required by legislation

A person carrying out an ERA must also be a registered suitable operator under the *Environmental Protection Act 1994* (EP Act).

Contaminated land:

It is a requirement of the EP Act that if an owner or occupier of land becomes aware a notifiable activity (as defined in Schedule 3 and Schedule 4) is being carried out on the land, or that the land has been, or is being, contaminated by a hazardous contaminant, the owner or occupier must, within 22 business days after becoming so aware, give written notice to the chief executive.

	29/2/13
Signature	Date

Mark Cavicchiolo
Department of Environment and Heritage Protection
Delegate of the administering authority
Environmental Protection Act 1994

Enquiries:
Carrie Goldsmith
ES - Reg Serv - Northern – Cairns
PO Box 7230
Cairns QLD 4870
Phone: (07) 4222 5395
Fax: (07) 4222 5070
Email: carrie.goldsmith@ehp.qld.gov.au

Obligations under the *Environmental Protection Act 1994:*

In addition to the requirements found in the conditions of this environmental authority, the holder must also meet their obligations under the EP Act, and the regulations made under the EP Act. For example, the holder must comply with the following provisions of the Act:

- general environmental duty (section 319)
- duty to notify environmental harm (section 320-320G)
- offence of causing serious or material environmental harm (sections 437-439)
- offence of causing environmental nuisance (section 440)
- offence of depositing prescribed water contaminants in waters and related matters (section 440ZG)
- offence to place contaminant where environmental harm or nuisance may be caused (section 443)

Conditions of environmental authority:

This environmental authority consists of the following parts

Applicable Part	ERA	Location
Part 1 – Daintree River Dredging	ERA 16(1a) Dredging >1000t but <10000t per year	Lot 3 on Plan SP126928 Cape Tribulation Road, Daintree QLD 4873
Part 2 – Regulated Waste Transport	ERA 57(2a) Regulated Waste Transport (other than tyres) in 1 – 5 vehicles	This activity is a mobile and temporary activity under the *Environmental Protection Act 1994.*

Part 1: Daintree River Dredging	
Agency interest: General	
Condition number	**Condition**
P1-G1	The maximum volume of sediment permitted to be removed at the Daintree River Ferry Crossing under the terms of this approval is 10,000m^3 in any twelve (12) month period commencing from the date of this approval.
P1-G2	In carrying out an ERA to which this approval relates, all reasonable and practicable measures must be taken to prevent and / or to minimise the likelihood of environmental harm being caused.
P1-G3	Dredging of the Daintree River Ferry Crossing will only be conducted to facilitate safe navigation of the crossing by the Daintree River Ferry.

P1-G4	The operator of an ERA to which this approval relates must: • Install all measures, plant and equipment necessary to ensure compliance with the conditions of this approval; • Maintain such measures, plant and equipment in a proper and efficient condition; and • Operate such measures, plant and equipment in a proper and efficient manner.
P1-G5	From commencement of an ERA to which this approval relates, a site based management plan (SBMP) must be implemented. The SBMP must identify all sources of environmental harm, including but not limited to the actual and potential release of all contaminants, the potential impact of these sources and what actions will be taken to prevent the likelihood of environmental harm being caused. The SBMP must also provide for the review and 'continual improvement' in the overall environmental performance of all ERAs that are carried out. The SBMP must address the following matters: • Environmental commitments - a commitment by senior management to achieve specified and relevant environmental goals; • Identification of environmental issues and potential impacts; • Control measures for routine operations to minimise likelihood of environmental harm; • Contingency plans and emergency procedures for non-routine situations; • Organisational structure and responsibility; • Effective communication; • Monitoring of contaminant releases; • Conducting environmental impact assessments; • Staff training; • Record keeping; and • Periodic review of environmental performance and continual improvement.
P1-G6	The site based management plan must not be implemented or amended in a way that contravenes any condition of this environmental authority.
P1-G7	Record, compile and keep all monitoring results required by this environmental authority and present this information to the administering authority when requested.
P1-G8	All records required by this environmental authority must be kept for 5 years.
P1-G9	Acid sulfate soils must be managed such that contaminants are not directly or indirectly released to any waters.

P1-G10	All areas used for the storage or treatment of acid sulfate soils or other contaminants must be constructed, installed and maintained: • So as to prevent any release of contaminants through the bed or banks of the pond to any waters (including ground water); • So that a freeboard of not less than 0.5 metres is maintained at all times; and • So as to ensure the stability of the bunded area's construction.
P1-G11	Suitable banks and/or diversion drains must be installed and maintained to exclude stormwater runoff from entering any bunded areas or other structures used for the storage or treatment of contaminants including acid sulfate soils or wastes.
P1-G12	All acid sulphate soils must be disposed of or managed within the authorised place.
P1-G13	Any temporary or permanent dewatering ponds or water bodies used to contain or treat acid sulphate soils must not be constructed on a watercourse.
P1-G14	Telephone the administering authorities Pollution Hotline or local office as soon as practicable after becoming aware of any release of contaminants not in accordance with the conditions of this approval.
P1-G15	A written notice detailing the following information must be provided to the administering authority within 14 days of any advice provided in accordance with this condition: • The name of the operator, including their approval / registration number; • The name and telephone number of a designated contact person; • Quantity and substance released; • Vehicle and registration details; • Person/s involved (driver and any others); • The location and time of the release; • The suspected cause of the release; • A description of the effects of the release; • The results of any sampling performed in relation to the release; • Actions taken to mitigate any environmental harm caused by the release; and • Proposed actions to prevent a recurrence of the release.
P1-G16	A competent person(s) must conduct any monitoring required by this approval.
P1-G17	All instruments, equipment and measuring devices used for measuring or monitoring in accordance with any condition of this approval must be calibrated, and appropriately operated and maintained
P1-G18	The daily operation of the dredging activity and pollution control equipment must be carried out by a person(s) with appropriate experience and/or qualifications to ensure the effective operation of that control equipment.

P1-G19	An appropriate spill kit, personal protective equipment and relevant operator instructions / emergency procedure guides for the management of wastes and chemicals associated with the ERA must be kept at the site.
P1-G20	Anyone operating under this approval must be trained in the use of the spill kit.
P1-G21	A record of all material dredged from the approved location must be kept detailing the following information: • Date of dredging; • Quantity of dredge material, including method of determination; • Description of dredge material; • Analysis of material in accordance with the latest edition of the administering authorities instructions for the treatment and management of acid sulfate soils; and • Destination of the dredge material including date and time of placement, quantity placed and method of volumetric determination.

Agency interest: Air

Condition number	Condition
P1-A1	When requested by the administering authority, dust and particulate monitoring must be undertaken to investigate any complaint of environmental nuisance caused by dust and/or particulate matter and the results notified within 14 days to the administering authority following completion of monitoring. Monitoring must be carried out at a place(s) relevant to the potentially affected dust sensitive place and at upwind control sites and must include: • For a complaint alleging dust nuisance, dust deposition; and • For a complaint alleging adverse health effects caused by dust, the concentration per cubic metre of particulate matter with an aerodynamic diameter of less than 10 micrometre (pm) (PM10) suspended in the atmosphere over a 24hr averaging time.
P1-A2	The release of noxious or offensive odours or any other noxious or offensive airborne contaminants resulting from the activity must not cause a nuisance at any nuisance sensitive or commercial place.
P1-A3	The release of dust and/or particulate matter resulting from the ERA must not cause an environmental nuisance at any nuisance sensitive or commercial place.

P1-A4	Dust and particulate matter must not exceed the following levels when measured at any nuisance sensitive or commercial place:
	• Dust deposition of 120 milligrams per square metre per day, when monitored in accordance with Australian Standard AS 3580.10.1 of 2003 (or more recent editions); OR
	• A concentration of particulate matter with an aerodynamic diameter of less than 10 micrometre (µm) (PM10) suspended in the atmosphere of 150 micrograms per cubic metre over a 24 hour averaging time, at a nuisance sensitive or commercial place downwind of the site, when monitored in accordance with:
	  • Australian Standard AS 3580.9.6 of 2003 (or more recent editions) 'Ambient air - Particulate matter - Determination of suspended particulate PM10 high-volume sampler with size-selective inlet -Gravimetric method'; or
	  • Any alternative method of monitoring PM10 which may be permitted by the 'Air Quality Sampling Manual' as published from time to time by the administering authority.

Agency interest: Water

Condition number	Condition
P1-W1	Contaminants may only be released to waters from the release points and in compliance with the release limits listed in Table 1 – Water quality release limits. Monitoring shall be conducted and records kept of contaminant releases to waters from the release points at the frequency and for the parameters specified in Table 1 – Water quality release limits. All determinations of the quality of contaminants released will be: • Performed by a person or body possessing appropriate experience and qualifications to perform the required measurements; and • Made in accordance with methods prescribed in the administering authorities Water Quality Sampling Manual, 3rd Edition, December 1999, or more recent additions or supplements to that document as such become available.

Table 1 – Water quality release limits

Release / monitoring point	Quality characteristic	Minimum	50th Percentile	Maximum	Monitoring frequency
Background site (B) 500 meters up-current of dredging site in Daintree River	Turbidity[3] pH[3] Dissolved Oxygen[3]	-	-	-	Daily when undertaking dredging
Impacted Site (1) 500 meters down-current of dredging site in Daintree River	Turbidity[3] pH[3] Dissolved Oxygen[3]	 Background Background – 10%	80th Percentile of Background or 10NTU whichever is greater[2]	No visible plume Background	Daily when undertaking dredging
Discharge point from bunded stockpile area	Turbidity[3] pH[3]	 6.5		No visible plume 9.0	Daily when releasing water from stockpile area

1. Levels based on the 80th percentile are derived using ANZECC (2000) methodology and are based on the reference site defined in Table 1.
2. The 50th and 80th percentile must be determined based on no more than five (5) consecutive samples.
3. Background and Impacted monitoring site turbidity values are to be determined with a nephelometer, pH values with a pH meter and Dissolved Oxygen values with a polarographic oxygen probe within a 60 minute time frame while activity is occurring.

P1-W2	Settled/treated stormwater runoff waters from those areas of the site that drain to the sediment control system must only be released in compliance with the release limits listed in Table 1 – Water quality release limits.
P1-W3	Erosion protection measures and sediment control measures must be implemented and maintained to prevent erosion and the release of sediment.
P1-W4	Contaminants other than settled/treated stormwater runoff waters must not be released from the site to waters.

Agency interest: Noise	
Condition number	**Condition**
P1-N1	The operator of the ERA must implement all reasonable and practical measures to prevent or minimise noise emissions from the undertaking of the activity. Such measures must include but not be limited to: • The use of four stroke outboard motors only to control movement of the sand barge; • Training and monitoring of equipment operators to ensure that there is no scraping of equipment parts on the concrete barge ramp; • The use of trailer brakes only when trucks are operated on the ferry; • The lining of the excavator engine bay with an appropriate noise retardant material; • Fitment of acoustic silencing / critical residential type mufflers to exhausts of plant equipment; and • The laying of rubber matting on the operational area of the deck of the ferry during dredging operations.
P1-N2	When requested by the administering authority, noise monitoring must be undertaken to investigate any complaint of noise nuisance, and the results notified within 14 days to the administering authority. Monitoring must include: • L_A 10, adj, 10 mins • L_A 1, adj, 10 mins • The level and frequency of occurrence of impulsive or tonal noise; • Atmospheric conditions including wind speed and direction; • Effects due to extraneous factors such as traffic noise; and • Location, date and time of recording.

Agency interest: Land	
Condition number	**Condition**
Nil conditions	

Agency interest: Waste	
Condition number	**Condition**
Nil conditions	
Agency interest: Social	
Condition number	**Condition**
P1-S1	The operator of the ERA must record the following details for all complaints received and provide this information to the administering authority on request: • Time, date, name and contact details of the complainant; • Reasons for the complaint; • Any investigations undertaken; • Conclusions formed; and • Any actions taken.

Part 2: Regulated Waste Transport	
Agency interest: General	
Condition number	**Condition**
P2-G1	The holder of this environmental authority must ensure that permanent records are kept for every load of regulated waste transported under this environmental authority, which includes at a minimum, the following information: • Date the waste was collected, accepted or transported; • Description of waste collected, accepted or transported; • Quantity of waste collected, accepted or transported; • Origin and destination of the waste; • Results of any analysis (where applicable); and • Method of waste treatment, reprocessing or disposal. Note: Records of documents maintained in compliance with a waste tracking system established under the *Environmental Protection Act 1994* or any other law for regulated waste will be deemed to satisfy this condition.
P2-G2	The holder of this environmental authority shall ensure that the operation and maintenance of plant and equipment is carried out by or under the supervision of a person competent to operate and maintain the plant and equipment.
Agency interest: Air	
Condition number	**Condition**
Nil conditions	
Agency interest: Water	
Condition number	**Condition**
P2-W1	The holder of this environmental authority must ensure that regulated wastes from the loading, transport and unloading processes are not directly or indirectly released to any waters.
Agency interest: Stormwater Management	
Condition number	**Condition**
P2-SM1	The holder of this environmental authority must take all practicable steps to ensure that any spillage or leakage of regulated wastes listed in Table 1 of condition P2-WS1 does not enter any waters, roadside gutter or stormwater drainage system.

P2-SM2	Any spillage of regulated wastes must be cleaned up as quickly as practicable by dry methods wherever possible or by other methods using the minimum amount of water to effectively clean the affected area.
P2-SM3	The maintenance and cleaning of equipment must not be carried out in areas from which the regulated wastes listed in Table 1 of condition P2-WS1 can be released into any waters, roadside gutter or stormwater drainage system.
Agency interest: Land	
Condition number	**Condition**
Nil conditions	
Agency interest: Noise	
Condition number	**Condition**
Nil conditions	
Agency interest: Waste Management	
Condition number	**Condition**
P2-WS1	The holder of the environmental authority must only transport by vehicle on a highway the regulated waste(s) referred to in Table 1. **Table 1:**

Vehicle	Registration	Waste Acceptance Criteria
Mazda BT50 Extra Cab Ute	146SMK	Acid and acid solutions, arsenic, asbestos, barium, batteries, biocides, cadmium, caustic solutions, chromium, filter cake sludges and residues, grease interceptor trap effluent and residues, hydrocarbons(oxygen, nitrogen or sulphur), lead, mercury, metal finishing effluent and residues, nickel, paint sludges and residues, saline effluent and residues, timber preservative effluent and residues, treatment tank sludges and residues, tyres and zinc compounds.

P2-WS2	The holder of this environmental authority must, on request by an authorised person make any vehicle covered by this environmental authority available for inspection.
P2-WS3	The holder of this environmental authority must cause the residues from cleaning of vehicles, trailers, equipment, containers and hoses used to transport regulated wastes, plus absorbent materials used to clean up any spillage to be disposed of only at premises whose operator is licensed under the *Environmental Protection Act 1994* to receive such wastes.

P2-WS4	The holder of this environmental authority must take all reasonable precautions necessary to prevent the spillage during loading, unloading and transportation of regulated wastes.
P2-WS5	The holder of this environmental authority must ensure that any regulated waste is not transported in a container mixed with any other waste.
P2-WS6	The holder of this environmental authority must ensure that when any vehicle referred to in this environmental authority is carrying regulated waste and parked overnight, it is kept in a secured area.
P2-WS7	The holder of this environmental authority must advise the administering authority of any permanent change of business address or of the place where the vehicles are kept.
P2-WS8	Any container used to transport wastes listed in the waste acceptance criteria of Table 1 of condition P2-WS1 must be: • Constructed so as to prevent spillage or leakage of the regulated waste; and • Suitable for the regulated waste being transported.
P2-WS9	The holder of the environmental authority must cause a legible copy of this environmental authority to be carried in the cabin of the vehicle at all times whilst transporting regulated waste on a public road.
P2-WS10	When regulated waste is transported on a public road the holder of the environmental authority must cause: • Written instructions as to clean up to be available in the cabin of the vehicle in case of any escape, spill or leak of regulated waste from the vehicle; and • The administering authority to be immediately advised of any escape, spill or leak of regulated waste from the vehicle; and • Any escape, spill or leak of regulated waste from the vehicle to be immediately cleaned up; and • A spill kit to be available with the vehicle: and • Safety equipment to be available with the vehicle; and • An Emergency Procedure Guide(s) to be carried in the cabin of the vehicle.
P2-WS11	The holder of this environmental authority must within five (5) days of changing vehicles to transport regulated waste authorised by this environmental authority notify the administering authority in writing of such changes of vehicle. The notification must include details of: • The vehicle it is to replace; • New vehicle registration number; • New vehicle make; • New vehicle capacity; and • New vehicle type.

Agency interest: Monitoring and Reporting	
Condition number	**Condition**
P2-MR1	All complaints received by the holder of this environmental authority relating to releases of contaminants from operations of the environmentally relevant activity must be recorded and kept with the following details: • Time, date and nature of complaint; • Type of communication (telephone, letter, personal etc.); • Name, contact address and contact telephone number of complainant (Note: if the complainant does not wish to be identified then "Not identified" is to be recorded); • Response and investigation undertaken as a result of the complaint; • Name of person responsible for investigating complaint; and • Action taken as a result of the complaint investigation and signature of responsible person.
P2-MR2	Where the holder of this environmental authority has not given notification to the administering authority under section 320 of the *Environmental Protection Act 1994*, as soon as practicable after becoming aware of any emergency or incident which results in the release of contaminants not in accordance, or reasonably expected to be not in accordance with the conditions of this environmental authority, the holder of this environmental authority must notify the administering authority of the release by telephone or facsimile.
P2-MR3	Where the holder of this environmental authority has not given notification to the administering authority under section 320 of the *Environmental Protection Act 1994*, the notification of emergencies or incidents as required by condition number P2-MR2 must include but not be limited to the following: • The holder of this environmental authority; • The location of the emergency or incident; • The number of the environmental authority; • The name and telephone number of the designated contact person; • The time of the release; • The time the holder of this environmental authority became aware of the release; • The suspected cause of the release; • The environmental harm and or environmental nuisance caused, threatened, or to be caused by the release; and • Actions taken to prevent further any release and mitigate any environmental harm and or environmental nuisance caused by the release.

P2-MR4	Where the holder of this environmental authority has not given notification to the administering authority under section 320 of the *Environmental Protection Act 1994*, not more than fourteen (14) days following the initial notification of an emergency or incident, the holder of this environmental authority must provide written advice of the information supplied in accordance with condition number P2-MR3 in addition to: • Proposed actions to prevent a recurrence of the emergency or incident; and • Outcomes of actions taken at the time to prevent or minimise environmental harm and or environmental nuisance.

Definitions

Key terms and/or phrases used in this document are defined in this section. Where a term is not defined, the definition in the *Environmental Protection Act 1994*, its regulations or environmental protection policies must be used. If a word remains undefined it has its ordinary meaning.

Term / Phrase	**Definition**
administering authority	Means the Department of Environment and Heritage Protection or its successor.
annual return	Means the return required by the annual notice under the *Environmental Protection Act 1994*
approved plans	Means the plans and documents listed in Schedule 1 of this document.
artificial waterway	Means an artificial channel, lake or other body of water. Artificial waterway includes: • An artificial channel that is formed because the land has been reclaimed from tidal water and is intended to allow boating access to allotments on subdivided land; • Other artificial channels subject to the ebb and flow of the tide; and • Any additions or alterations to an artificial waterway.
authorised place	Means the place authorised under this environmental authority for the carrying out of the specified environmentally relevant activity(ies).
canal	Means an artificial waterway surrendered to the State. A canal is an artificial waterway connected, or intended to be connected, to tidal water; and from which boating access to the tidal water is not hindered by a lock, weir or similar structure.
clinical waste	means waste that has the potential to cause disease including, for example, the following: • Animal waste; or • Discarded sharps; or • Human tissue waste; or • Laboratory waste.
coastal dune	Means a ridge or hillock of sand or other material on the coast and built up by the wind.
commercial place	Means a place used as an office or for business or commercial purposes.

dredge spoil	Means material taken from the bed or banks of waters by using dredging equipment or other equipment designed for use in extraction of earthen material.
dwelling	means any of the following structures or vehicles that is principally used as a residence and includes: • A house, unit, motel, nursing home or other building or part of a building; or • A caravan, mobile home or other vehicle or structure on land; or • A water craft in a marina.
erosion prone area	Means an area declared to be an erosion prone area under the *Coastal Protection and Management Act 1995.*
high water mark	Means the ordinary high water mark at spring tides.
infectious waste	Means waste containing viable micro-organisms or their toxins which are known or suspected to cause disease in animals or humans.
intrusive noise	means noise that, because of its frequency, duration, level, tonal characteristics, impulsiveness or vibration that: • Is clearly audible to, or can be felt by, an individual; and • Annoys the individual In determining whether a noise annoys an individual and is unreasonably intrusive, regard must be given to Australian Standard 1055.2 — 1997 Acoustics — Description and Measurement of Environmental Noise Part 2 Application to Specific Situations.
L_A 10, adj, 10 mins	Means the A-weighted sound pressure level, (adjusted for tonal character and impulsiveness of the sound) exceeded for 10% of any 10 minute measurement period, using Fast response.
L_A 1, adj, 10 mins	Means the A-weighted sound pressure level, (adjusted for tonal character and impulsiveness of the sound) exceeded for 1% of any 10 minute measurement period, using Fast response.
LA, max adj, T	Means the average maximum A-weighted sound pressure level, adjusted for noise character and measured over any 10 minute period, using Fast response.
land	Means land excluding waters and the atmosphere.
mg/L	Means milligrams per litre.
noxious	Means harmful or injurious to health or physical wellbeing.
NTU	Means nephelometric turbidity units.

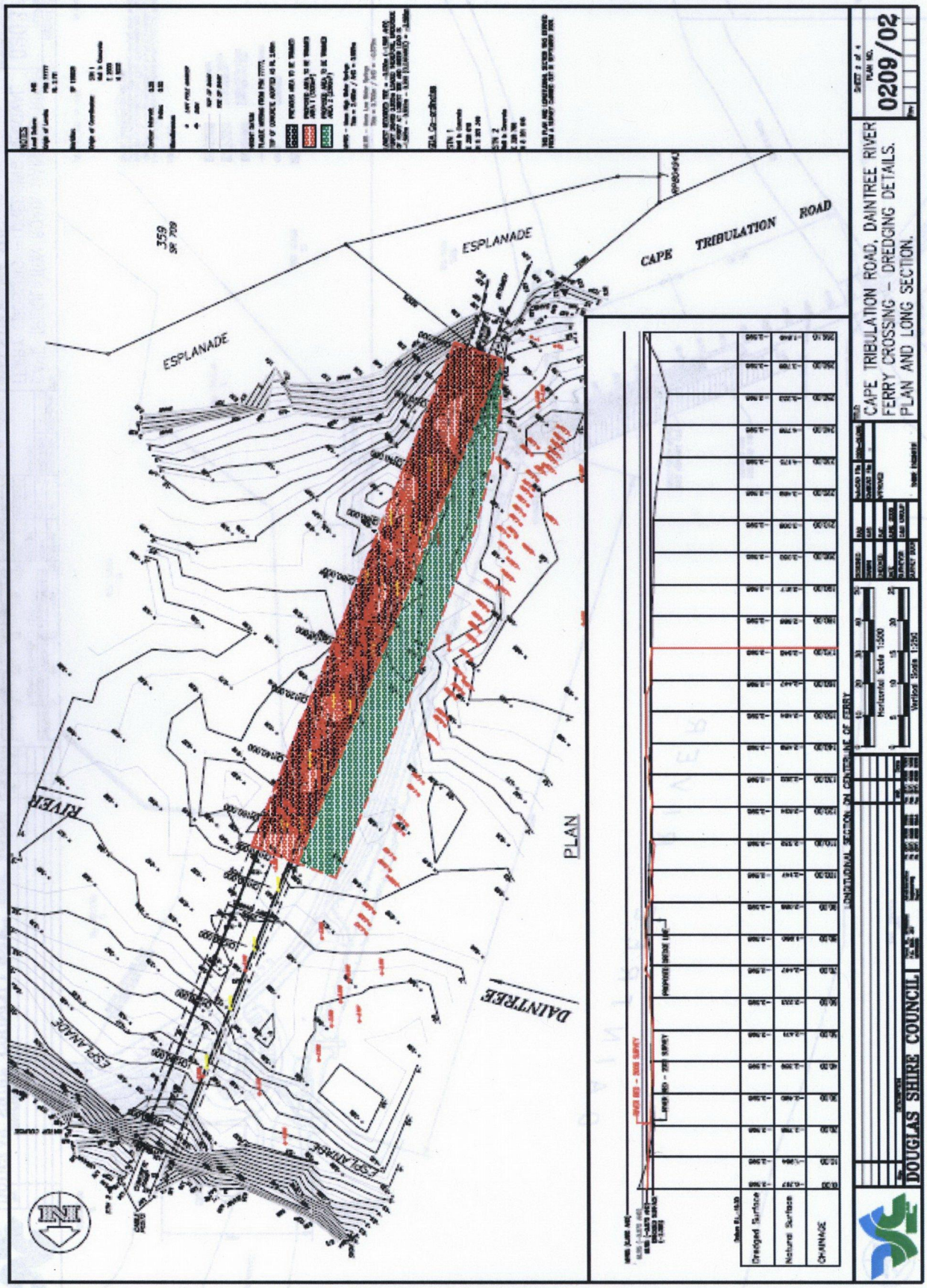
nuisance sensitive place	Includes: • A dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises; or • A motel, hotel or hostel; or • A kindergarten, school, university or other educational institution; or • A medical centre or hospital; or • A protected area under the Nature Conservation Act 1992, the Marine Parks Act 1992 or a World Heritage Area, or • A public thoroughfare, park or gardens; or • A place used as a workplace, an office or for business or commercial purposes and includes a place within the curtilage of such a place reasonably used by persons at that place.
offensive	Means causing offence or displeasure; is disagreeable to the sense; disgusting, nauseous or repulsive.
ponded pasture	Means a permanent or periodic pondage of water in which the dominant plant species are pasture species used for grazing or harvesting.
protected area	Means: • A protected area under the Nature Conservation Act 1992; or • A marine park under the Marine Parks Act 1992; or • A World Heritage Area.
quarry material	Means material on State coastal land, other than a mineral within the meaning of any Act relating to mining. Material includes for example stone, gravel, sand, rock, clay, mud, silt and soil, unless it is removed from a culvert, stormwater drain or other drainage infrastructure as waste material.
regulated waste	means non-domestic waste mentioned in the Environmental Protection Regulation 2008 (whether or not it has been treated or immobilised), and includes: • For an element - any chemical compound containing the element; and • Anything that has contained the waste.
safety equipment	Means equipment available to lend protection to the driver of the vehicle covered by this environmental authority for the regulated waste being transported e.g. safety goggles, chemical resistant gloves, chemical resistant overalls, eye wash, touch, fire extinguisher(s).
site	Means land or tidal waters on or in which it is proposed to carry out the approved activity.

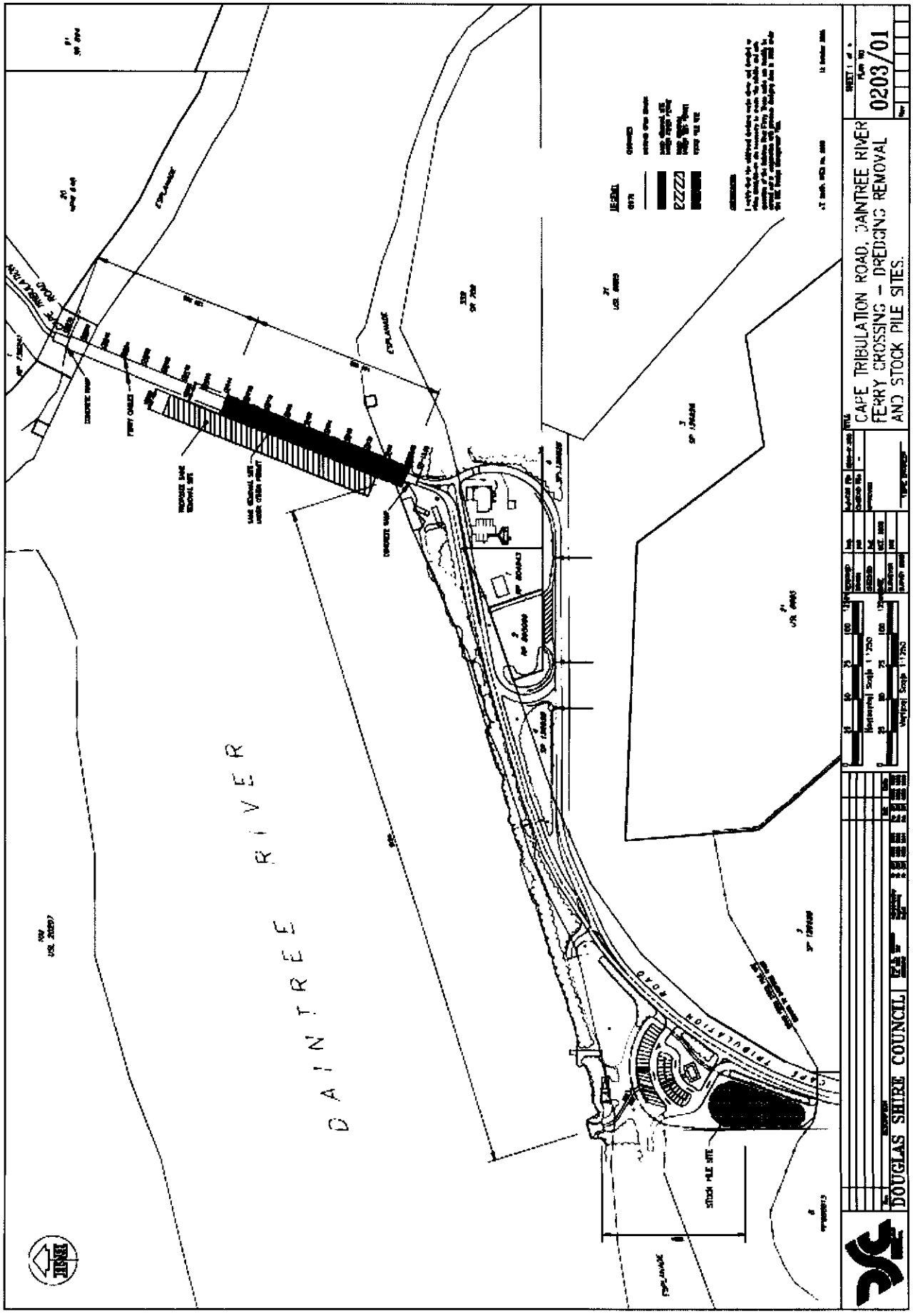
spill kit	Means container or stock of material which would enable a small spill, leak or escape of the regulated waste being transported to be safely and effectively cleaned up e.g broom, shovel, sealable bucket, absorbent material.
the holder of this environmental authority	Means Douglas Shire Council
tidal water	Means the sea and any part of a harbour or watercourse ordinarily within the ebb and flow of the tide at spring tides.
watercourse	Means a river, creek or stream in which water flows permanently or intermittently: • In a natural channel, whether artificially improved or not; or • In an artificial channel that has changed the course of the watercourse.
waters	Includes river, stream, lake, lagoon, pond, swamp, wetland, unconfined surface water, unconfined water natural or artificial watercourse, bed and bank of any waters, dams, non-tidal or tidal waters (including the sea), stormwater channel, stormwater drain, roadside gutter, stormwater run-off, and groundwater and any part- thereof.
You	Means the holder of this environmental authority or owner / occupier of the land which is the subject of this environmental authority.
50th percentile	Means not more than three (3) of the measured values of the quality characteristic are to exceed the stated release limit for any six (6) consecutive samples for a release/monitoring point at any time during the environmental activity(ies) works.
80th percentile	means not more than one (1) of the measured values of the quality characteristic is to exceed the stated release limit for any five (5) consecutive samples for a sampling point at any time during the environmental activity(ies) works

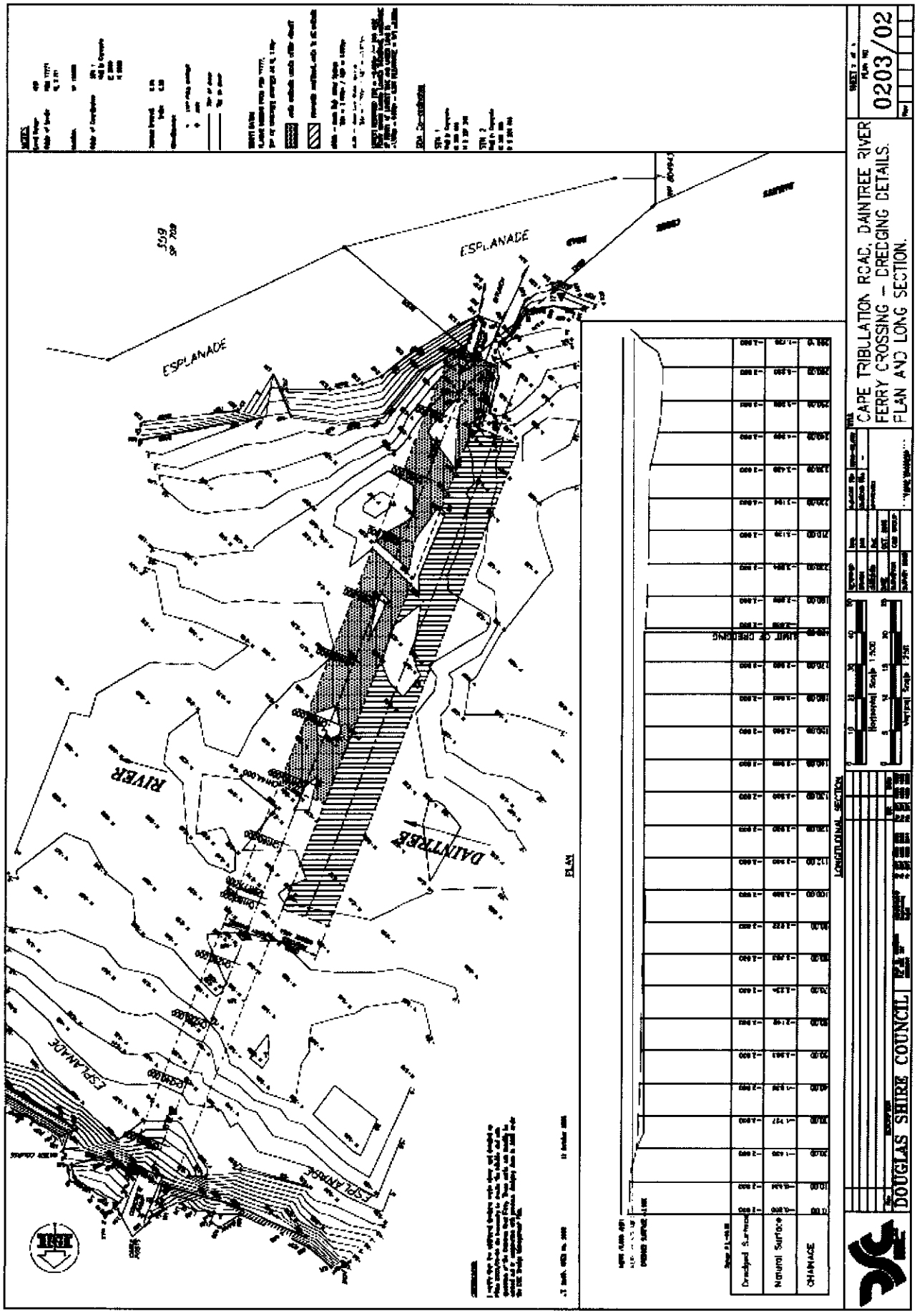
Schedules:

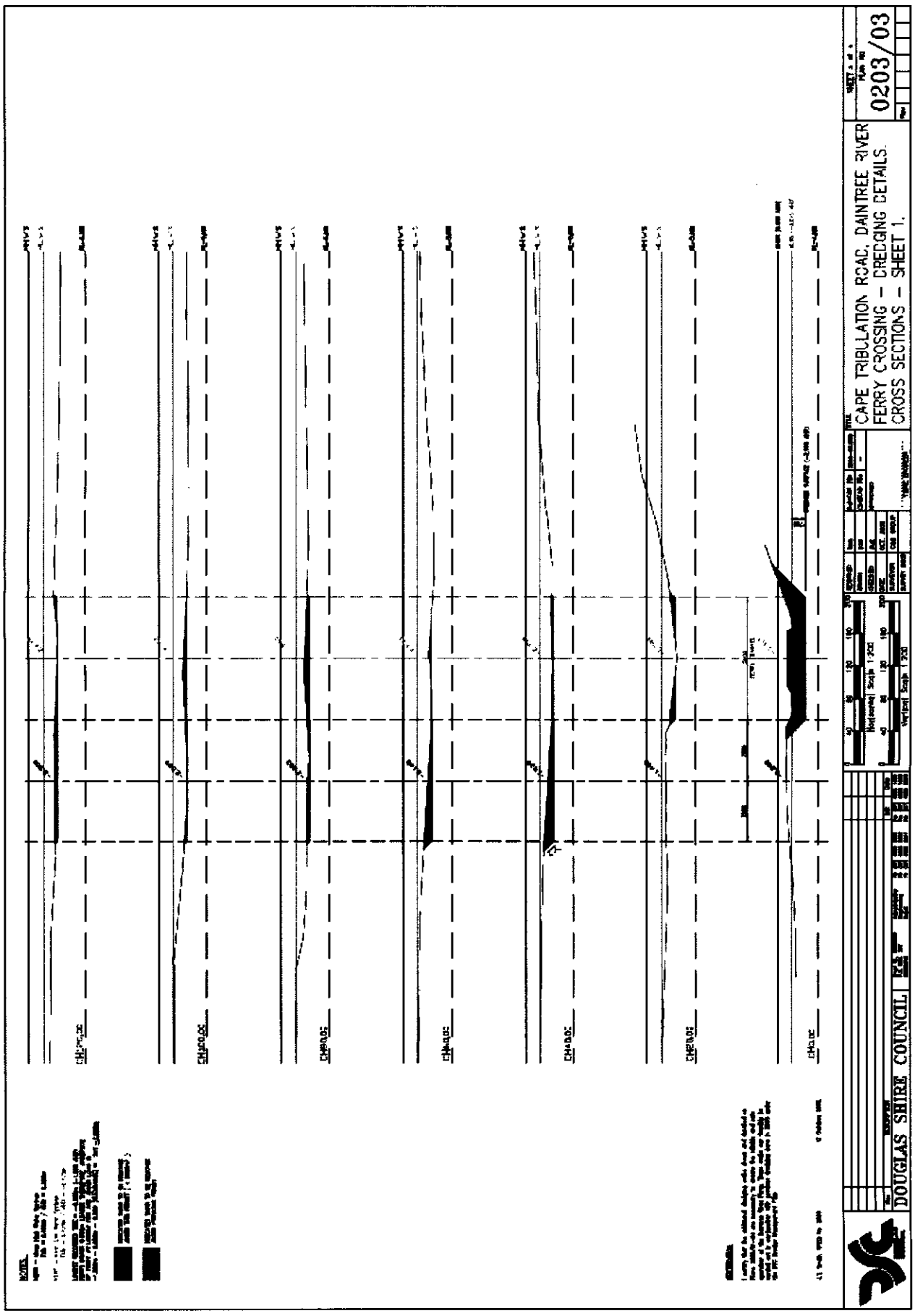
Schedule 1: Approved plans

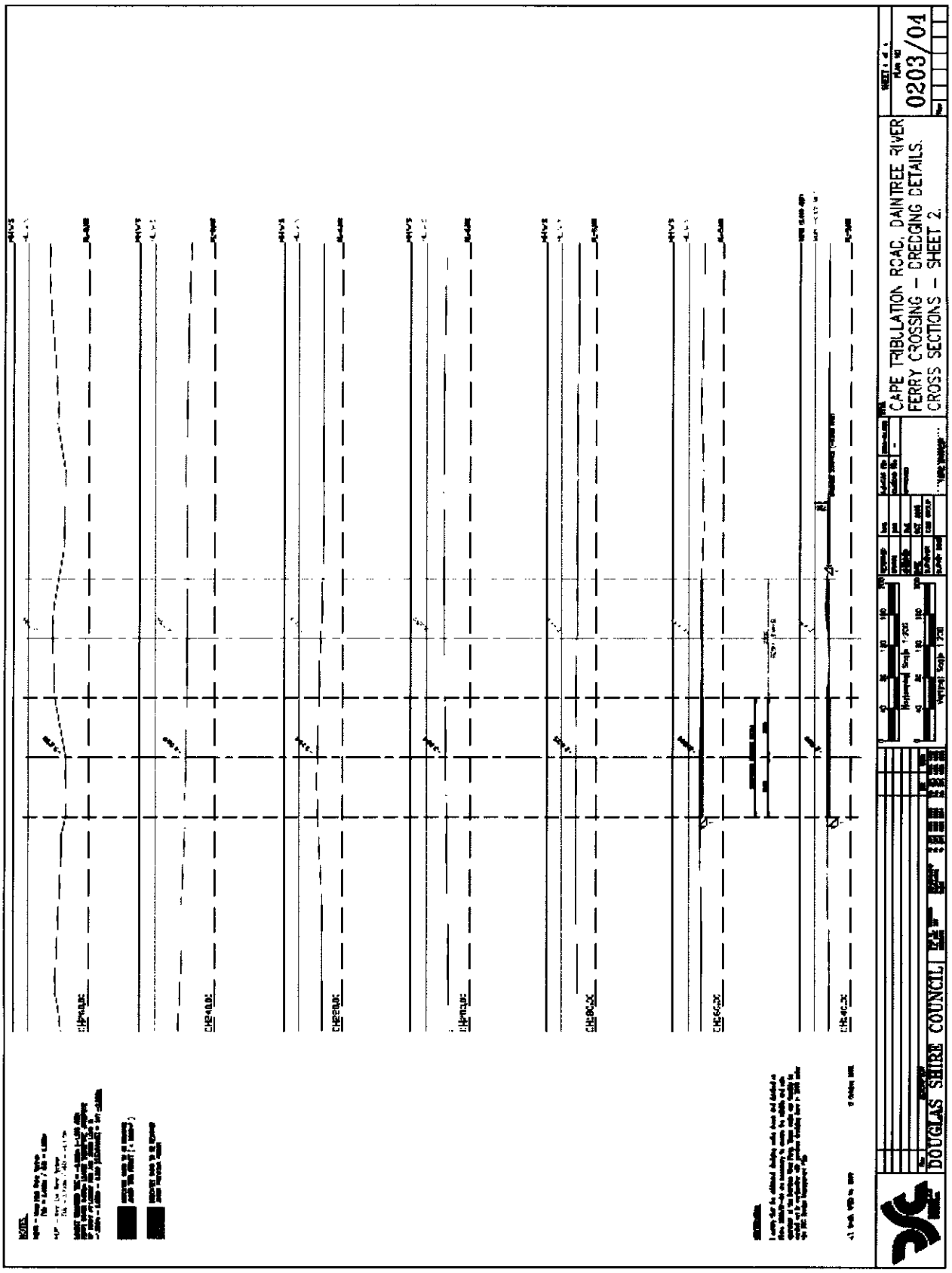
Plan No	Title	Applicable Part
0209/02	Cape Tribulation Road, Daintree River Ferry Crossing Dredging Details Plan and Long Section Sheet 2 of 4	Cape Tribulation Road – Daintree (Part 1of this environmental authority)
0203/01	Cape Tribulation Road, Daintree River Ferry Crossing Dredging Removal and Stock Pile Sites Sheet 1 of 4.	Cape Tribulation Road – Daintree (Part 1 of this environmental authority)
0203/02	Cape Tribulation Road, Daintree River Ferry Crossing Dredging Removal and Stock Pile Sites Sheet 2 of 4.	Cape Tribulation Road – Daintree (Part 1 of this environmental authority)
0203/03	Cape Tribulation Road, Daintree River Ferry Crossing Dredging Details Cross Sections Sheet 1	Cape Tribulation Road – Daintree (Part 1 of this environmental authority)
0203/04	Cape Tribulation Road, Daintree River Ferry Crossing Dredging Details Cross Sections Sheet 2	Cape Tribulation Road – Daintree (Part 1 of this environmental authority)


ESPLANADE
CAPE TRIBULATION ROAD
ESPLANADE
359
SP 709
RIVER
DAINTREE
ESPLANADE
ESPLANADE
PLAN
CAPE TRIBULATION ROAD, DAINTREE RIVER
FERRY CROSSING - DREDGING DETAILS.
PLAN AND LONG SECTION.
0209/02
DOUGLAS SHIRE COUNCIL
Dredged Surface
Natural Surface
CHAINAGE


CAPE TRIBULATION ROAD, DAINTREE RIVER
FERRY CROSSING – DREDGING REMOVAL
AND STOCK PILE SITES.
0203/01
DOUGLAS SHIRE COUNCIL
DAINTREE RIVER
TRIBULATION ROAD
STOCK PILE SITE


ESPLANADE
ESPLANADE
RIVER
DAINTREE
ESPLANADE
ESPLANADE
PLAN
LONGITUDINAL SECTION
CHAINAGE
Natural Surface
Dredged Surface
CAPE TRIBULATION ROAD, DAINTREE RIVER
FERRY CROSSING - DREDGING DETAILS.
PLAN AND LONG SECTION.
0203/02
DOUGLAS SHIRE COUNCIL


DOUGLAS SHIRE COUNCIL
CAPE TRIBULATION ROAD, DAINTREE RIVER
FERRY CROSSING - DREDGING DETAILS
CROSS SECTIONS - SHEET 1.
0203/03



END OF PERMIT

Appendix F

Proposal plans, by Trinity Engineering and Consulting

DAINTREE RIVER

RERefer to Sketch 1508-41 for details

DAINTREE RIVER

REFRefer to Sketch 1508-42 for details

CAPE TRIBULATION ROAD

TO MOSSMAN

CAPE TRIBULATION ROAD

FOREST CREEK ROAD

REFER TO FIGURRefer to Sketch 1508-51 for details

CAPE TRIBULATION ROAD

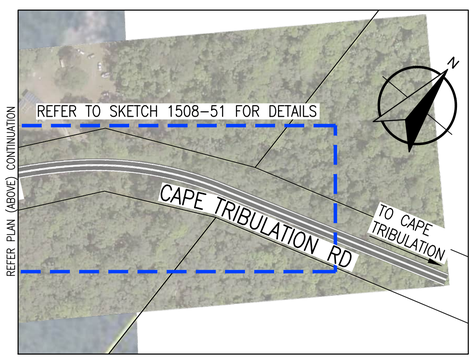
CAPE TRIBULATION RD

REFER INSET (BELOW) CONTINUATION

DAINTREE RIVER

N

PLAN
SCALE 1:2000



INSET
SCALE 1:2000

DRAFT FOR DISCUSSION PURPOSES ONLY

LEGEND

ROADWAY

0 20 40 60 80 100m
SCALE 1:2000 (A1 SIZE)

DOUGLAS SHIRE COUNCIL

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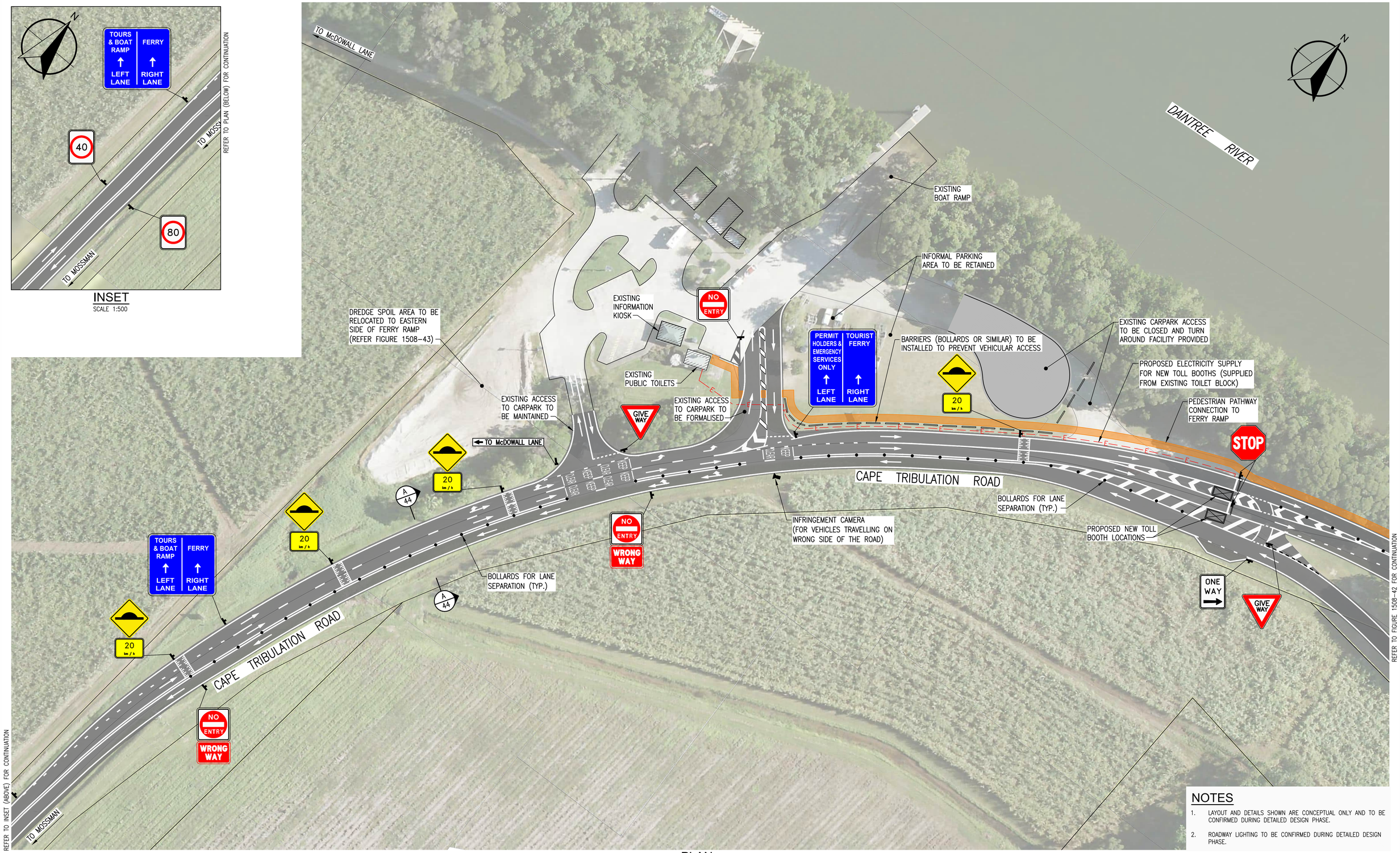
Client	DOUGLAS SHIRE COUNCIL
Project	DAINTREE RIVER FERRY PRIORITY LANES
Title	OPTION 4 GENERAL ARRANGEMENT

JOB No.	Scale (A1 size)	Date	Drawing No.	Revision
1508	1:2000	10 MAY 2024	FIGURE 1508-40	A

TEC File: T:\1508 Daintree River Ferry North Side Priority Lane\Drawings\1508-FIGURE-040(A).dwg
Printed: 10 May 2024, 9:47 AM (tony)

REFER TO PLAN (BELOW) FOR CONTINUATION

INSET
SCALE 1:500



REFER TO INSET (ABOVE) FOR CONTINUATION

REFER TO FIGURE 1508-42 FOR CONTINUATION

NOTES

1. LAYOUT AND DETAILS SHOWN ARE CONCEPTUAL ONLY AND TO BE CONFIRMED DURING DETAILED DESIGN PHASE.
2. ROADWAY LIGHTING TO BE CONFIRMED DURING DETAILED DESIGN PHASE.

PLAN
SCALE 1:500

LEGEND

- ROADWAY
- PEDESTRIAN PATHWAY
- PROPOSED FERRY RAMP
- TOLL BOOTH
- ROAD SIGN
- BOLLARD FOR LANE SEPARATION (OR APPROVED EQUIVALENT)

LEGEND (cont.)

- PROPOSED BOLT ON DIVIDING KERB (OR APPROVED EQUIVALENT)
- PROPOSED SPEED HUMP
- E — PROPOSED ELECTRICAL CONDUIT
- W — PROPOSED WATER SERVICE
- PROPOSED SPARE CONDUITS

0 5 10 15 20 25m
SCALE 1:500 (A1 SIZE)

DRAFT FOR DISCUSSION PURPOSES ONLY

DOUGLAS SHIRE COUNCIL

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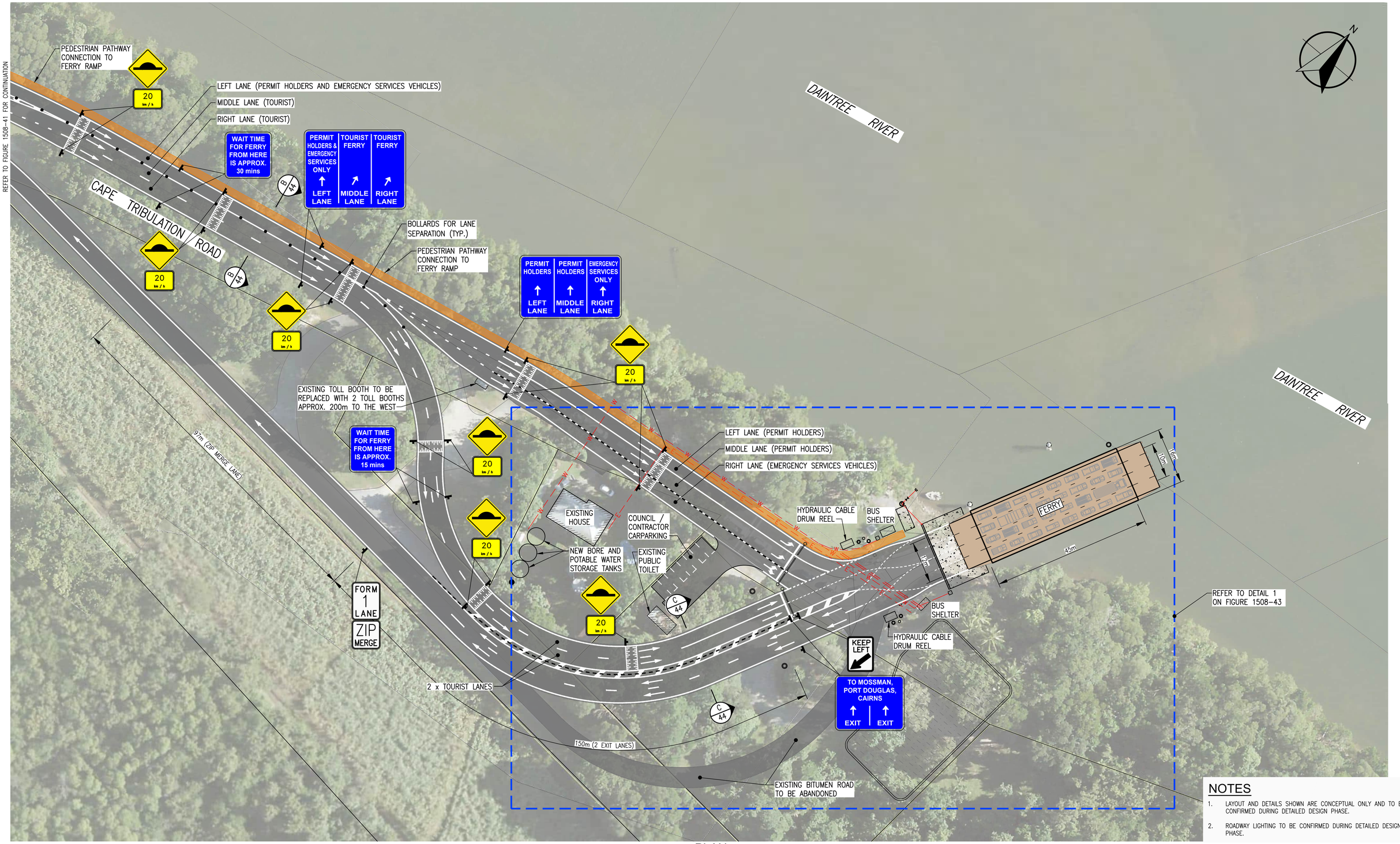
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Cairns QLD 4870
Email: admin@trinityengineering.com.au

Client	DOUGLAS SHIRE COUNCIL
Project	DAINTREE RIVER FERRY PRIORITY LANES
Title	SOUTHERN SIDE - OPTION 4 SITE PLAN - SHEET 1 OF 2

JOB No.	Scale (A1 size)	Date	Drawing No.	Revision
1508	1:500	10 MAY 2024	FIGURE 1508-41	C

TEC File: T:\1508 Daintree River Ferry North Side Priority Lanes\Drawings\ 1508-FIGURE-041(C) -042(C) -043(C) -044(C).dwg
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REFER TO FIGURE 1508-41 FOR CONTINUATION

TEC File: T:\1508 Daintree River Ferry North Side Priority Lane\Drawings\ 1508-FIGURE-041(C) -042(C) -043(C) -044(C).dwg

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NOTES

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2. ROADWAY LIGHTING TO BE CONFIRMED DURING DETAILED DESIGN PHASE.

LEGEND

- ROADWAY
- PEDESTRIAN PATHWAY
- PROPOSED FERRY RAMP
- TOLL BOOTH
- ROAD SIGN
- BOLLARD FOR LANE SEPARATION (OR APPROVED EQUIVALENT)

LEGEND (cont.)

- PROPOSED BOLT ON DIVIDING KERB (OR APPROVED EQUIVALENT)
- PROPOSED SPEED HUMP
- PROPOSED ELECTRICAL CONDUIT
- PROPOSED WATER SERVICE
- PROPOSED SPARE CONDUITS

PLAN
SCALE 1:500

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0 5 10 15 20 25m
SCALE 1:500 (A1 SIZE)

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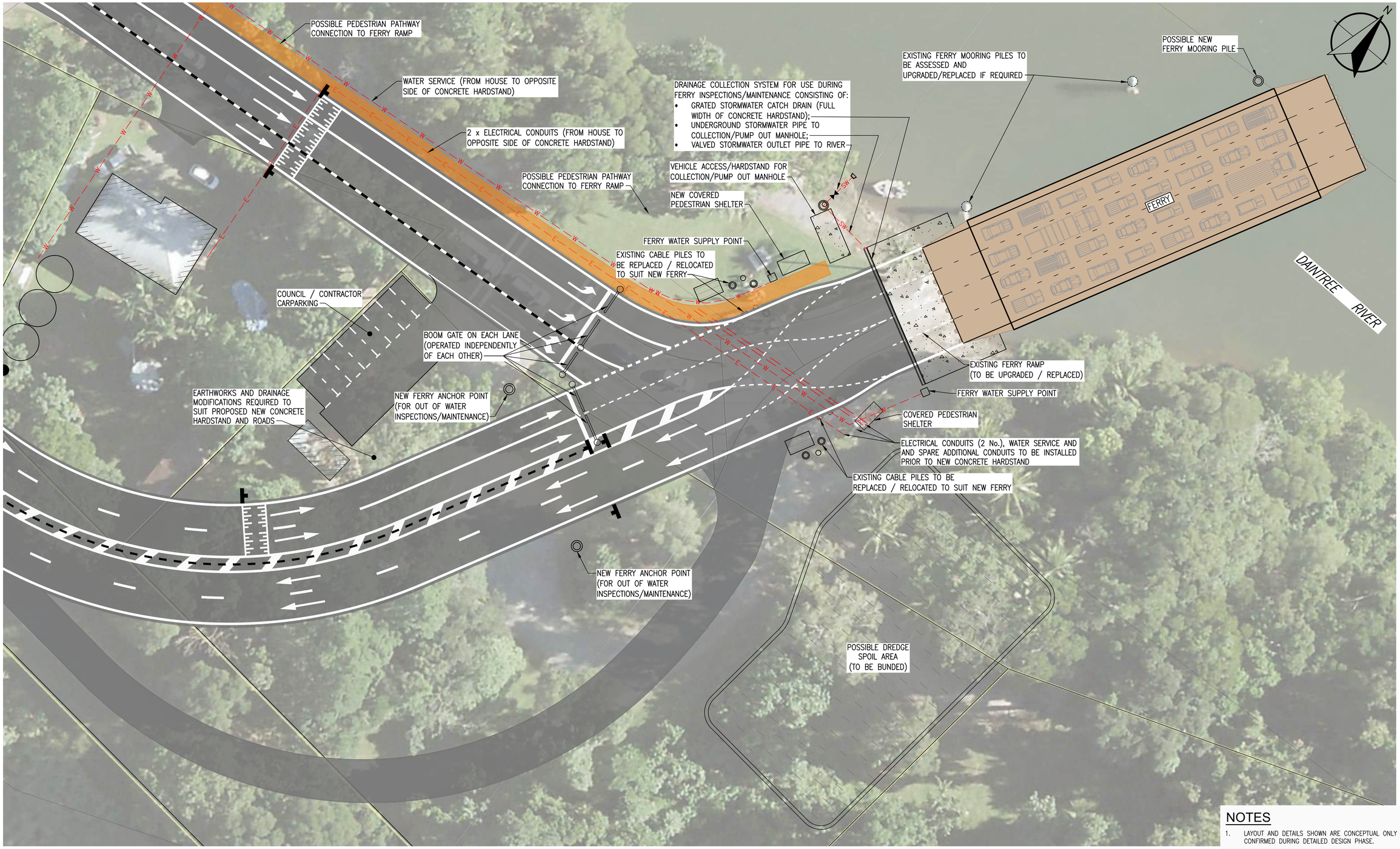
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Client	DOUGLAS SHIRE COUNCIL
Project	DAINTREE RIVER FERRY PRIORITY LANES
Title	SOUTHERN SIDE - OPTION 4 SITE PLAN - SHEET 2 OF 2

JOB No.	Scale (A1 size)	Date	Drawing No.	Revision
1508	1:500	10 MAY 2024	FIGURE 1508-42	C



DETAIL 1/42
SCALE 1:250

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- ROAD SIGN
- BOLLARD FOR LANE SEPARATION (OR APPROVED EQUIVALENT)

LEGEND (cont.)

- PROPOSED BOLT ON DIVIDING KERB (OR APPROVED EQUIVALENT)
- PROPOSED SPEED HUMP
- E — PROPOSED ELECTRICAL CONDUIT
- W — PROPOSED WATER SERVICE
- PROPOSED SPARE CONDUITS

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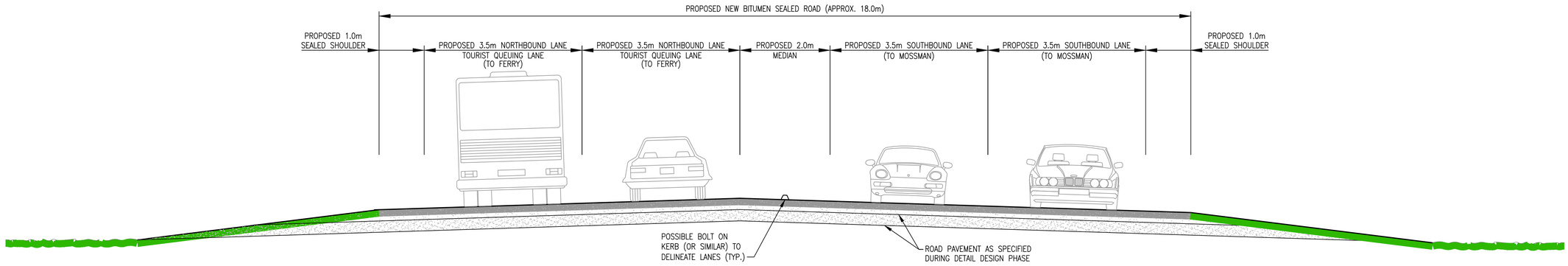
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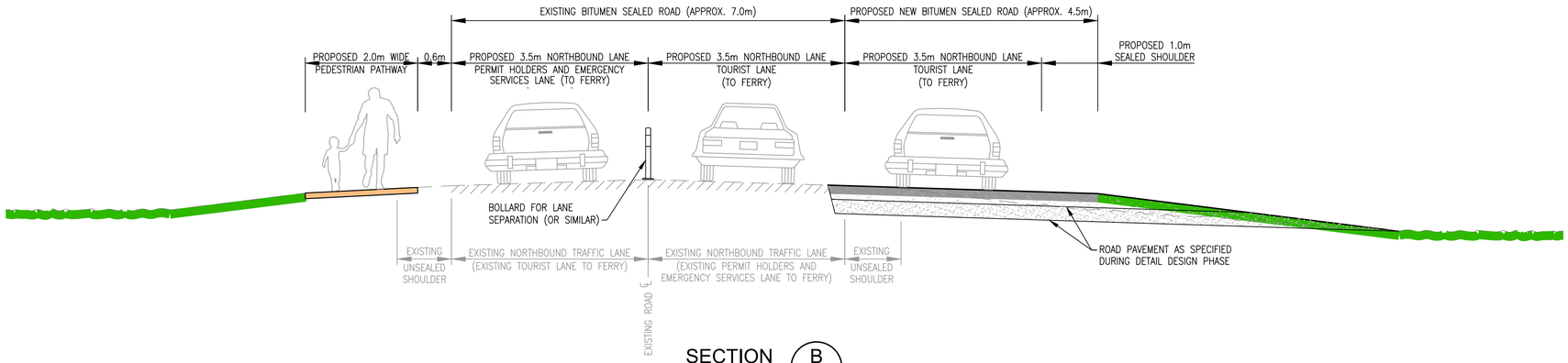
Client	DOUGLAS SHIRE COUNCIL
Project	DAINTREE RIVER FERRY PRIORITY LANES
Title	SOUTHERN SIDE - OPTION 4 LOADING AND UNLOADING AREA

JOB No.	Scale (A1 size)	Date	Drawing No.	Revision
1508	AS SHOWN	10 MAY 2024	FIGURE 1508-43	C

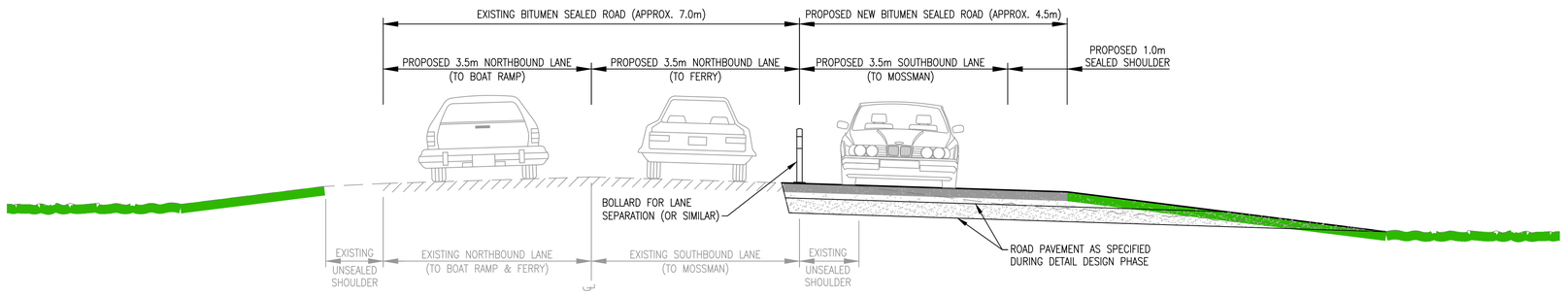
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SECTION C
SCALE 1:50
42



SECTION B
SCALE 1:50
42



SECTION A
SCALE 1:50
41

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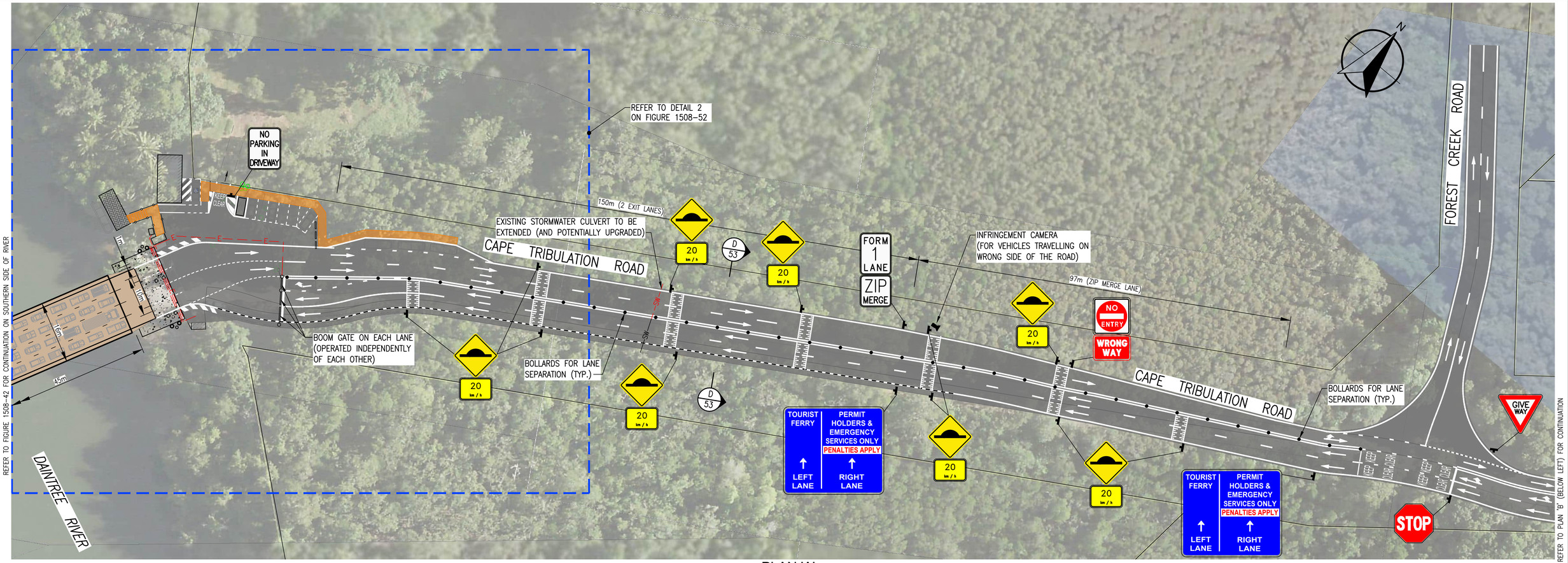
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Project	DAINTREE RIVER FERRY PRIORITY LANES
Title	SOUTHERN SIDE - OPTION 4 TYPICAL SECTIONS

JOB No.	Scale (A1 size)	Date	Drawing No.	Revision
1508	1:50	10 MAY 2024	FIGURE 1508-44	B

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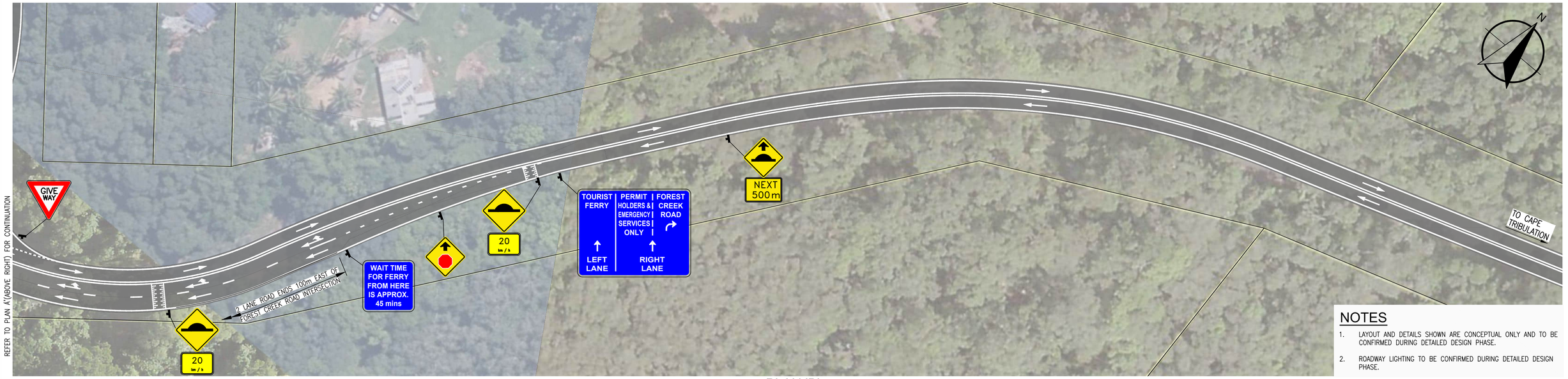


REFER TO FIGURE 1508-42 FOR CONTINUATION ON SOUTHERN SIDE OF RIVER

REFER TO PLAN 'B' (BELOW LEFT) FOR CONTINUATION

PLAN 'A'

SCALE 1:500



REFER TO PLAN 'A' (ABOVE RIGHT) FOR CONTINUATION

PLAN 'B'

SCALE 1:500

LEGEND

- ROADWAY
- PEDESTRIAN PATHWAY
- PROPOSED FERRY RAMP
- TOLL BOOTH
- ROAD SIGN
- BOLLARD FOR LANE SEPARATION (OR APPROVED EQUIVALENT)

LEGEND (cont.)

- PROPOSED BOLT ON DIVIDING KERB (OR APPROVED EQUIVALENT)
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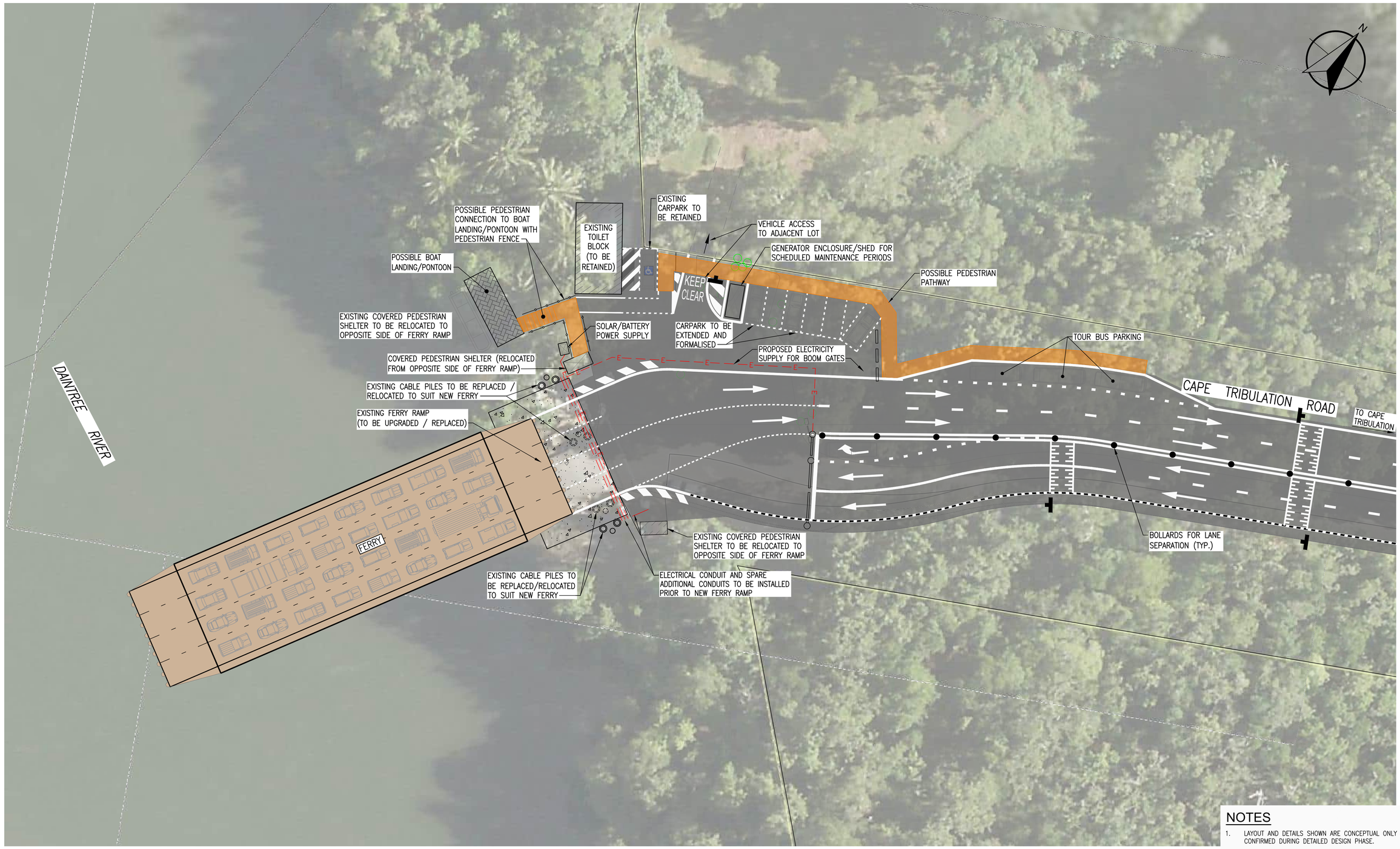
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Client	DOUGLAS SHIRE COUNCIL
Project	DAINTREE RIVER FERRY PRIORITY LANES
Title	NORTHERN SIDE - OPTION 4 SITE PLAN

JOB No.	Scale (A1 size)	Date	Drawing No.	Revision
1508	1:500	10 MAY 2024	FIGURE 1508-51	A

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DETAIL 2/51
SCALE 1:250

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- PROPOSED WATER SERVICE
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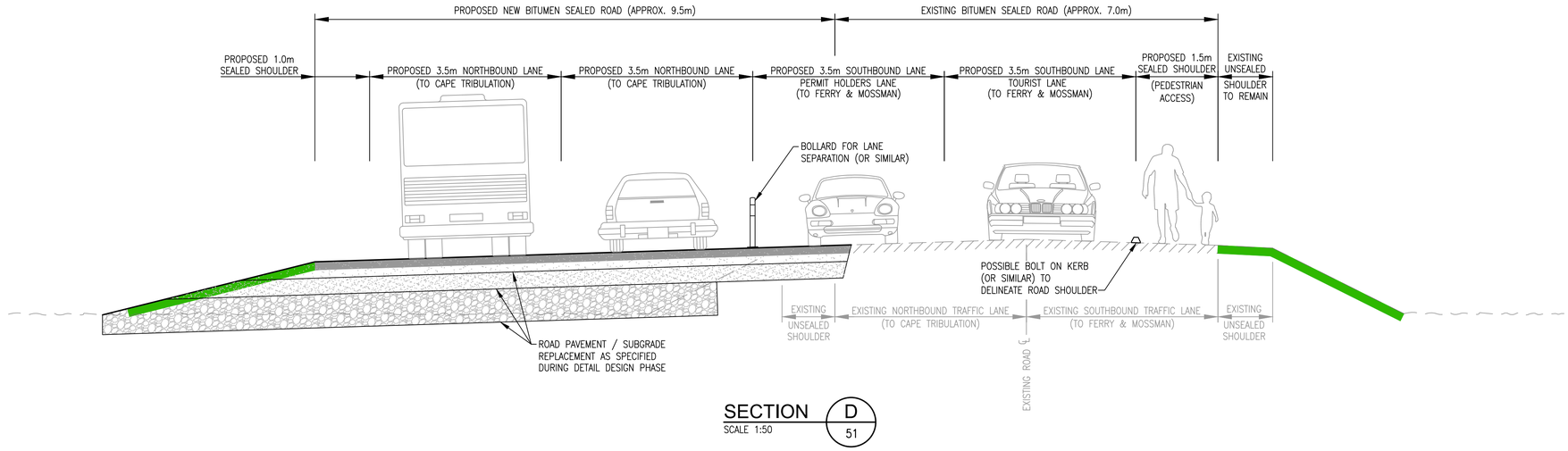
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Client	DOUGLAS SHIRE COUNCIL
Project	DAINTREE RIVER FERRY PRIORITY LANES
Title	NORTHERN SIDE - OPTION 4 LOADING AND UNLOADING AREA

JOB No.	Scale (A1 size)	Date	Drawing No.	Revision
1508	AS SHOWN	10 MAY 2024	FIGURE 1508-52	A

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SECTION D
SCALE 1:50
51

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Client	DOUGLAS SHIRE COUNCIL
Project	DAINTREE RIVER FERRY PRIORITY LANES
Title	NORTHERN SIDE - OPTION 4 TYPICAL SECTIONS

JOB No.	Scale (A1 size)	Date	Drawing No.	Revision
1508	1:50	10 MAY 2024	FIGURE 1508-53	A

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Appendix G

Basis of Design, Daintree Ferry Landside Infrastructure, Hansen Engineering Group



Basis of Design

Daintree Ferry Landside Infrastructure
25019

Prepared for:
Durack

Document Control Record

Revision Register

Revision	Description	Date	Prepared	Reviewed	Approved
1	Draft BoD for Durack's review	20/08/25	ES	NH	ES

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1.0 Introduction

1.1 Existing issues

The Daintree Ferry currently faces significant operational challenges, including traffic congestion and lengthy wait times, particularly during peak tourist seasons and public holidays. The existing vessel's limited capacity creates bottlenecks, while constrained loading and unloading areas further slow vehicle movements. Seasonal wet weather can disrupt operations and exacerbate delays, and increasing tourism demand continues to place pressure on the service, reducing reliability for both visitors and residents.

1.2 Why a bridge is not pursued

Douglas Shire Council (DSC) strongly opposes the construction of a bridge across the Daintree River for several reasons, including the following key points:

- The ferry is an asset that enhances the experience of visiting the Daintree.
- The ferry provides ongoing job opportunities.
- A bridge would facilitate more nighttime traffic, potentially increasing wildlife roadkill.
- The Daintree offers a wilderness experience, and DSC aims to protect the area from overdevelopment.
- A bridge would not be flood-proof and would not improve conditions during the wet season.
- Upgrading the ferry and its associated infrastructure will effectively address demand and decrease waiting times.

Moreover, the Douglas Shire Council has decided to outsource the operation of the ferry to a private entity, which will involve a larger vessel. Consequently, there is a need for new landside infrastructure for loading and unloading at both the south and north sides of the river.

1.3 Decision to upgrade the ferry and infrastructure

DSC engaged an external consultant in 2024 to explore options for improving landside infrastructure and to prepare a concept design. The preferred concept aims to alleviate current traffic congestion and reduce long wait times by upgrading the current three-lane car ferry to a four-lane car ferry. This upgrade is intended to increase the number of vehicles transported across the river each hour, enhancing the tourism experience for visitors while also reducing travel times for locals.

1.4 Delivery approach

The council has awarded the Design and Construct contract to Durack, who engaged Hansen Engineering Group (HEG) to undertake the civil and structural design, which includes water reticulation and electrical design, as detailed in Section. 2.2.

1.5 Purpose of this Report

This report serves as a foundational project document outlining the Basis of Design (BoD) for Douglas Shire Council's Daintree Ferry Landslide infrastructure project, such that the design achieves compliance with the necessary standards. This Report provides:

- The background to the project.
- The project scope.
- Civil and structural basis of design, including:
    - Relevant standards and guidelines.
    - Proposed design parameters.

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2.0 Project Scope

2.1 Location

The Daintree River crossing is located 50 km north of Port Douglas, approximately a 45-minute drive to the Daintree ferry's loading and unloading area to the south of the river. The project landside infrastructure extends about 800m to the south and 850m to the north of Daintree's ferry loading and unloading area, as illustrated below in Figure 1. Key existing features along the alignment include:

- Ferry unloading and loading areas, including ferry ramps and mooring infrastructure.
- Lane duplication and changes to existing lane configurations and alignment.
- Side road accesses and intersections.
- Vehicle and pedestrian laydown areas.
- A dredge spoil bund.
- Pedestrian footpaths on the south and north sides.
- Ferry anchor points.
- Car parking (south).
- Bus parking (north).
- Boom gates and relocation of 2x existing toll booths.
- Bus stop pedestrian shelters.

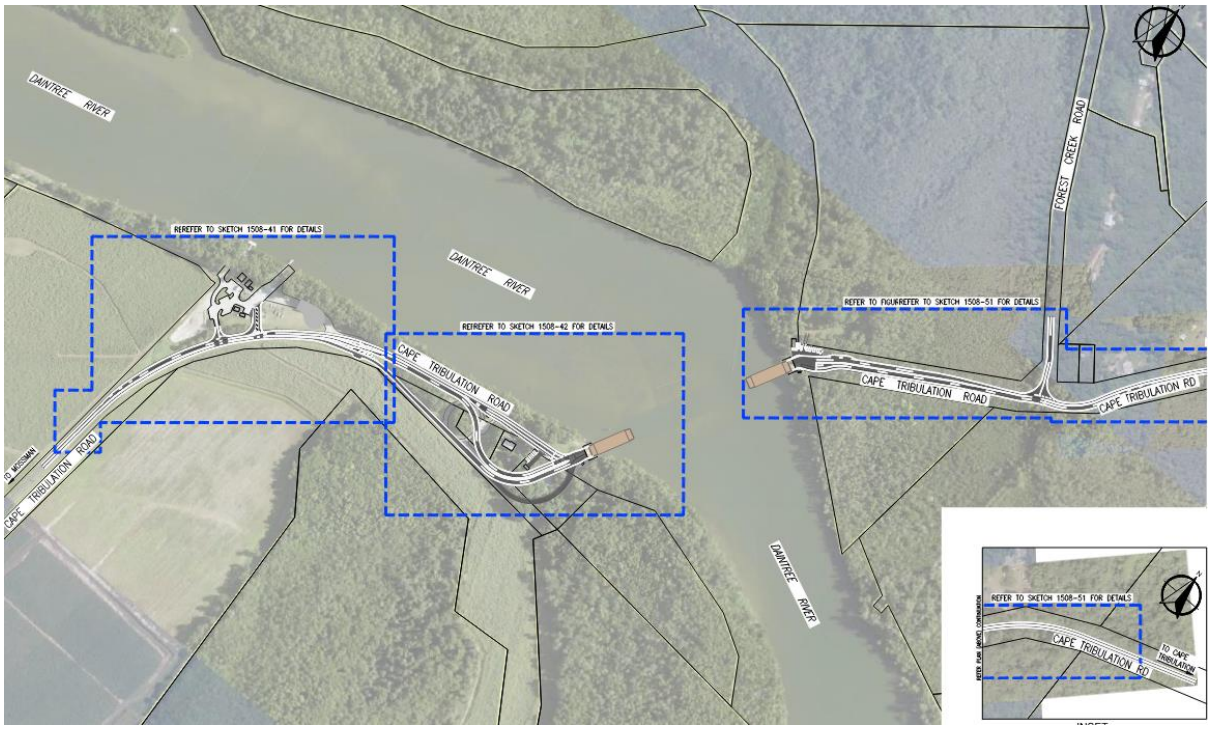


Figure 1 – Project location (Source: RFQ Concept design)

2.2 Scope

DSC have broken the project down into four Separable Portions (SP), as listed below.

SP1 – HEG's design scope (30%, 70%, 100% and IFC deliverables):

- Scope items as shown in the concept design, as listed below.

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- All civil design components, including:
  - Roads.
  - Pathways.
  - Drainage and cross-drainage.
  - Carparks.
  - Dredge material bund.
  - Permanent signage and linemarking.
- All structural/marine design components, including:
  - Concrete landing ramps.
  - Ferry land points.
  - Ferry cable connection piles.
- Water reticulation design (to be included in 70% Design).
- Electrical design, including CCTV (to be included in 70% Design).
- Hydraulic modelling (based on existing flood modelling to be supplied)

Durack's construction scope:

- SP2 – Northern area civil works.
- SP3 – Southern area civil works.
- SP4 – Loading and unloading areas.

2.3 Out of scope

The following is considered out of scope for HEG.

- Geotechnical investigations, detailed survey
- The design of the upgraded ferry.
- Existing recreational boat ramp to remain
- Providing design options, the provided concept design configuration is the basis of our design.
- Landscaping.
- Environmental management, approvals and permits.

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3.0 Civil design

3.1 Introduction

Hansen Engineering Group (HEG) was provided with a concept design prepared by others, which had been previously agreed to and approved by Douglas Shire Council (DSC). This concept included an increase from a single lane to dual lanes in both the northbound and southbound directions, with the intent of mitigating vehicle queuing and improving traffic flow efficiency. The additional lanes will facilitate the rapid movement of vehicles off the ferry, reducing congestion at the landing points and enhancing overall operational performance. The road infrastructure leading up to the ferry is unique in that it is not a typical road or highway; it operates at low speeds (20–40 km/h), incorporates multiple speed bumps, and functions primarily as a queuing facility for vehicles awaiting ferry access.

According to the brief, the Far North Queensland Regional Organisation of Councils (FNQROC) will serve as the primary guideline. However, it may not always be the most suitable option, as there may be design requirements outside of the FNQROC guidelines. Therefore, the final civil design guidelines, as shown in this section, will be a combination of FNQROC and Austroads.

This BoD will be reviewed and accepted by Durack and Douglas Shire Council to confirm that the scope and guidelines adopted are suitable.

3.2 Roads (general)

3.2.1 Standards and guidelines

The following standards and guidelines will be adopted:

- FNQROC Design manual:
  - D1 Road Geometry.
  - D2 Site grading.
  - D3 Road Pavement.
  - D4 Stormwater Drainage.
  - D6 Water reticulation.
  - D8 Utilities.
- FNQROC Specifications:
  - S1 Earthworks.
  - S2 Road Pavement.
  - S4 Stormwater.
- FNQROC Standard Drawings:
  - S1000, S1005 and S1006.
- All FNQROC Design manuals, Drawings, and Specifications are Development Manual Version 9 – 2023.

As referred to in the above FNQROC manuals, in the instance that the design requirements are not available, the civil design shall generally comply with the requirements of other available road design guidelines:

- IPWEA Street Design Manual.
- Austroads Guide to Road Design Part 3: Geometric Design (Edition 3.4, February 2021)
- Austroads Guide Design vehicles and Turning Path template Guide (4.0 May 2023)
- Austroads Guide to Road Design Part 1 Objectives of Road Design (Edition 5.2, March 2025).
- AS2890.2 – 2018 Parking facilities – Off-street commercial vehicle facilities.

3.2.2 Design and check vehicles

The design and check vehicles below will be adopted

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Table 1 – Design and check vehicles

Location	Design vehicle and radius	Check vehicle and radius
Cape Tribulation Road - Permanent holders and service vehicles	12.5m Single unit truck/Bus 12.5 m radius	19m Prime mover and semi-trailer 15 m radius
Cape Tribulation Road – Tourist-only lanes	8.8m Service vehicle 9 m radius	12.5m Single unit truck/Bus 12.5 m radius

3.2.3 Design and posted speeds

The design and posted speeds below will be adopted, which are based on the road's existing posted speed and the speeds shown on the approved concept design.

Table 2 – Design speeds

Road/area	Direction	Posted speed (km/h)	Design speed (km/h)
Existing Cape Tribulation Road (south of project extents)	Northbound and southbound	60	70
Existing Cape Tribulation Road (south of project extents)	Northbound and southbound	80	90
Cape Tribulation Road (south)	Northbound (ferry approach)	40	50
Cape Tribulation Road (south)	Southbound (ferry departure)	40	50
Cape Tribulation Road (north)	Northbound (ferry departure)	40	50
Cape Tribulation Road (north)	Southbound (ferry approach)	40	50
Existing Cape Tribulation Road (north of project extents)	Northbound and southbound	40	50

*20km/h at Speedbumps

3.2.4 Cross section

The minimum lane widths listed below will be adopted. However, with approval from DSC, HEG proposes to decrease traffic lanes to 3.3m where possible (vehicle path geometry/radius to govern lane widths in areas)

In accordance with *FNQROC D1 – Road Geometry, Table D1.1 and S1005, Type 2 for Access Street* and *Austroads Guide to Road Design Part 3 – Geometric Design*, a 3.3 m traffic lane is considered suitable for urban and rural low-speed environments with posted speed limits of 20 – 40 km/h. Within this speed range, narrower lanes can improve driver awareness, encourage reduced operating speeds, and enhance safety outcomes, while still accommodating standard vehicle envelopes, including service and emergency vehicles.

The subject site is located within the Daintree region, an environmentally sensitive area with a narrow existing road corridor. Adopting the FNQROC minor collector width of 3.5 m would necessitate additional excavation, vegetation clearing, and potential disturbance to protected flora and fauna. By applying a 3.3 m lane width, the design can:

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- Minimise environmental impact by reducing the road footprint.
- Avoid unnecessary disturbance to adjacent habitats and root zones.
- Reduce construction footprint and associated sediment and erosion risks.
- Align with best practices for low-speed environments.
- Provide value for money.

Given the constrained corridor and the priority to protect the surrounding environment, the proposed 3.3 m lane width provides a safe, functional, and environmentally responsible design outcome, consistent with FNQROC and Austroads guidelines.

Table 3 – Typical cross-section

Element	Value	Guideline
Traffic lane width (outside of project extents)	3.5m	FNQROC D1 – Road Geometry, Table D1.1 and S1006, Type 5 for Minor Collector Road.
Traffic lane width (within project extents)	3.3 m	FNQROC D1 – Road Geometry, Table D1.1 and S1005, Type 2 for Access Street. Austroads Guide to Road Design Part 3 – Geometric Design Section 4.2.5.
Shoulder width (sealed)	1.0 m	FNQROC D1 – Road Geometry, Table D1.1 and S1005, Type 3 for Low Density Residential.
Footpath	2.0 m, one side only. Refer to Section 3.7 for further details	FNQROC D1 – Road Geometry, Table D1.1 and S1005, Type 2 for Access Street.
Batter slopes	Desirable – 1:6 Minimum – 1:4	FNQROC – Design Manual
Cross fall – road formation	3%	FNQROC D1 – Road Geometry D1.08
Cross fall – pathways	2.5% max	FNQROC D1.19

3.3 Horizontal alignment

3.3.1 General

HEG's design is based on the provided concept design, aiming to maintain the horizontal alignment close to the existing road alignment to minimise road widening.

3.3.2 Standards and guidelines

The following standards and guidelines will be adopted:

- Austroads Guide to Road Design Part 3: Geometric Design (Edition 3.4, February 2021)

Table 4 – Minimum radii horizontal curves

Operating speed km/h	Desirable min	Absolute min	Guideline
40	35	31	Austroads Guide to Road Design Part 3 – Geometric Design Table 7.6. Rural Road, Superelevation 6% max
60	94	73	
80	229	157	

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3.4 Vertical alignment

3.4.1 General

The project is within a relatively flat area. It is only past Forrest Creek Road that has a noticeable longitudinal grade. HEG's design will match the existing vertical alignment.

3.4.2 Standards and guidelines

The following standards and guidelines will be adopted:

- Austroads Guide to Road Design Part 3: Geometric Design (Edition 3.4, February 2021)

Table 5 Minimal K-value

Operating speed	Minimum length of crest vertical curve (m)	Minimum K-value S < L	Guideline
40	20-30	20-30	Austustroad Guide to Road design, part 3: Geometric Design table 8.6
60	*40-50*	50-62	
80	60-80	100-133	

3.5 Intersections

3.5.1 General

Within the southern area of the project footprint, existing accesses to the existing car park and existing boat ramp will be maintained and upgraded. The proposed access upgrades will be as per the approved concept design, that is, an unsignalized T-intersection with a left turn lane provided.

Within the northern area, the existing intersection of Cape Tribulation Road and Forrest Creek Road will be maintained and upgraded. The proposed intersection upgrade will be as per the approved concept design, that is, an unsignalized T-intersection, with no dedicated turn lanes provided.

3.5.2 Standards and guidelines

As noted in FNQROC design manual D1, all intersections shall be designed in accordance with Austroads guidelines and, if required, the TMR's Road Planning Design Manual:

- Austroads Guide to Road Design Part 4_Intersections and Crossing General (Edition 2.2, May 2023).
- Austroads Guide to Road Design Part 4A_Unsignlised and Signalised Intersections (Edition 3.2, May 2023).
- Road Planning and Design Manual Edition 2, Supplement to Austroads Guide to Road design – Part 4 Intersections and crossings – General (Nov 2023)

3.6 Car parks

3.6.1 General

The approved concept design included:

- New council/contractors carparking (8 spots) at the southern end
- The existing carparking at the northern end is to be extended and formalised, with six additional spots and one disabled parking spot.
- 3 x on-street parking for Tour bus parking at the northern side.

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3.6.2 Standards and guidelines

The following standards and guidelines will be adopted:

- AS2890.1 – 2004 Parking facilities – Off-street car parking.
- AS2890.2 – 2018 Parking facilities – Off-street commercial vehicle facilities.
- AS2890.5 – 2020 Parking facilities – On-street parking.
- AS2890.6 – 2022 Parking facilities – Off-street parking for people with disabilities.
- AS1742.11 – 2016 Manual of uniform traffic control devices – Parking controls.
- Austroads Guide to Road Design Part 3 Geometric Design (Edition 3.4, February 2021).

3.6.3 Car park off-street dimensions

The carpark dimensions below will be adopted.

Table 6 – Car park dimensions off-street parking

Standard	Angle	Width (m)	Length (m)
AS2890.5	90	2.5	5.4

3.6.4 Car park on-street dimensions

The on-street carpark dimensions would be suitable to fit 3 x 8.8 service vehicles or 2 x 12.5 single unit truck/bus.

3.7 Footpaths

3.7.1 General

The concept design entailed a concrete footpath along both the southern (500m) and northern (80m) areas to improve pedestrian safety.

3.7.2 Standards and guidelines

The following standards and guidelines will be adopted:

- FNQROC Design Manual D1
- AS1428.1 – 2009 Disability for access and mobility – General requirements for access – new building work.
- Austroads Guide to Road Design Part 6A Paths for Walking and Cycling (Edition 2.1, February 2021).
- Provided concept design by Trinity Engineering (2024)

3.7.3 Grades

The DDA compliant gradients and criteria below will be adopted.

Table 7 – Active transport DDA compliant criteria

Criteria	Grade (1:x)	Grade (%)	Landing intervals
Longitudinal grade	Shallower than 1:33	Shallower than 3.03%	Not required
Longitudinal grade	1:33	3.03%	25 m
Longitudinal grade	1:20	5.00%	15 m

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Criteria	Grade (1:x)	Grade (%)	Landing intervals
Longitudinal grade (max)	1:14	7.14%	9 m
Kerb Ramp	1:8	12.5%	N/A
Max crossfall on any surface	1:40 to 1:33	2.50 – 3.0%	N/A

3.7.4 Widths

The widths below will be adopted.

Table 8 – Footpath widths

Element	Value	Guideline
Footpath on one side of the road reserve for all road classifications	2m*	FNQROC D1 – Road Geometry, Table D1.18 pathways and Table D1.1 (Minor Collection Road

**Assumed not identified as a cycle network route*

3.8 Road furniture

3.8.1 General

Apart from general road signs and other typical road furniture, the concept design proposes bollards to physically delineate traffic lanes. HEG design will propose alternative traffic delineation methods, as bollards are deemed unsafe and costly; this will be addressed by line marking and a combination of mountable and non-mountable kerbs and non-rigid posts, to be included in the 30% Value Engineering workshop.

3.8.2 Standards and guidelines

The following standards and guidelines will be adopted:

- Permanent signing and road marking: AS1742.1 – 15 Manual of uniform traffic control devices (MUTCD) Part 1 to 15
- Austroads Guide to Road Design Part 6 Roadside Design, Safety and Barriers (Edition 4.0, June 2022) – if required

3.9 Pavement design

3.9.1 General

Design intent to match the existing pavement profile where possible for any widening works. Durack will undertake an additional four trench pits to confirm the existing pavement profile in the existing shoulder and lane, and two additional auger holes, a total of six test locations.

3.9.2 Standards and guidelines

The following standards and guidelines will be adopted:

- FNQROC Design manual D3 – Road Pavements (Mar 2017)
- Austroads Guide to Pavement Technology Part 2 – Pavement Structural Design (Edition 4.3, Nov 2019)
- Austroads Guide to Pavement Technology Part 4K – Selection Design Sprayed Seals (Edition 1.3, Nov 2019)

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Table 9 – Pavement design parameters

Criteria	Value	Comment
AADT	800	Based on the recent Traffic Model report (GHD 2021), provided by DSC, the adopted values.
Growth	1.027%	
% HV	11	
Subgrade CBR	4%	To be adopted based on the previous Geotechnical report (AH02 and AH07)
Design life	20 years	As per FNQROC - D3.05
Seal Design	Primer, 2-coat sprayed bitumen seal (16mm/10mm aggregate)	As per FNQROC – D3.13 Rural and Rural residential

3.10 Cul-De-Sac turning area

3.10.1 General

One informal access to Cape Tribulation Road will be turned into a Cul-De-Sac.

3.10.2 Standards and guidelines

As noted in FNQROC design guidelines D1 – Cul-de-sac, in addition to the requirements specified in FNQROC D1, cul-de-sac turning areas are to be designed in accordance with IPWEA Street Design Manual. The following standards and guidelines will be adopted:

- FNQROC Design Guidelines D1 Road Geometry.
- IPWEA Street Design Manual – Walkable neighbourhoods

3.11 Road Drainage

3.11.1 General

Within the project footprint, the following culverts have been captured by survey and confirmed with a recent site visit, as per the table below.

Table 10 – Existing Drainage structures

Area	Drainage pipe	Comment
Southern	2x 900 dia RCP	to be extended on one side
	1x 600 dia RCP	at existing access to remain as is
	2x 375 dia RCP	existing access to be extended on one side
	2x 450 dia RCP	to be extended on one side
	2x 450 dia RCP	to be extended on one side
	2x 450dia RCPs (buried with pit with a grate on the northern side)	to remain as is
Northern	1x 600 dia RCP	to be extended on one side
	1x 600 dia RCP at Forrest Creek Road	to remain as is

To accommodate additional lanes, five sets of culverts will need to be extended. Existing stormwater flows will outlet into the legal discharge points, and the design will have minor modifications to existing stormwater catchments and drainage networks.

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3.11.2 Standards and guidelines

The following standards and guidelines will be adopted:

- FNQROC Design Manual D4 – Stormwater Drainage.
- Queensland Urban Drainage Manual - QUDM – 4th Edition.
- Austroads Guide to Road Design Part 5 Drainage – General Hydrology and Considerations (Edition 4.0, January 2023).
- Austroads Guide to Road Design Part 5A Drainage: Road Surface, Networks, Basins and Subsurface (Edition 2.1, January 2023).
- Austroads Guide to Road Design Part 5B Drainage – Open Channels, Culverts and Floodway Crossings (Edition 1.2, January 2023).

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4.0 Utility design

4.1 General

The project footprint contains multiple existing utilities identified through Before You Dig Australia (BYDA) records and the survey. The following public utility plant (PUP) has been identified within the project area:

- **DSC Water:** An existing water main runs parallel to Cape Tribulation Road within the proposed road widening for approximately 250 m on the southern side. It was identified as a smaller PVC pipe running beneath a culvert, confirmed during the site visit. The pipe may provide a water supply to a property, irrigation for adjacent cane farming, or water for cattle. Care must be taken to locate the pipe prior to excavation.
- **Telecommunications:** Survey data indicate underground telecommunications crossing the road at the southern end of the project and near the Cape Tribulation Road/Forest Creek Road intersection, with pits conflicting with the proposed widening (refer to Figure 2). However, the site visit confirmed only marker posts at the southern end; no pits were visible at either location. Given the presence of a Telstra tower at nearby Forest Creek Road, telecommunications services are likely within the project footprint, although no assets were identified on BYDA. It is recommended to confirm by potholing at both locations.
- **Ergon Energy:** Both overhead and underground power are present within the project footprint. Power poles run along the eastern (northbound) side of Cape Tribulation Road at the southern project extent. One pole located on the inside of a horizontal curve is particularly constrained, with only a 1.7 m offset from the proposed traffic lane (refer to Figure 3). This pole was not captured in the original survey but was confirmed during the site visit to be approximately 3 m from the carriageway edge, directly conflicting with the proposed widening. HEG recommends adjusting the southern alignment to avoid relocating this pole, as relocation would be costly. Treatment requirements will be reviewed against the Austroads *Guide to Road Design, Part 6 – Roadside Design, Safety and Barriers*, noting the posted speed limit in this section is 60 km/h.



Figure 2 Telecommunications pits to be relocated



Figure 3 - Ergon Power Pole within the road formation

The approved concept design by Trinity Engineering forms the basis for the current road layout and has been endorsed by Douglas Shire Council. HEG's scope is to develop the detailed design in line with this concept, with only minor horizontal adjustments. However, following the site visit, HEG recommends a minor southern alignment shift to avoid costly relocation of the Ergon pole.

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All affected utility authorities must be notified due to the proximity of works to their assets. These authorities may impose additional construction requirements such as protective measures, restrictions on equipment, or on-site supervision. Such requirements will be identified through the notification process and included in the construction documentation.

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5.0 Structural design

5.1 General

The structural design scope for the project generally includes the following elements:

- Ferry landing ramps
- Ferry mooring piles
- Ferry anchor point
- Ferry cable piles
- Bus shelters
- Pedestrian pathways
- Stormwater culverts and inlet/outlet structures
- Slabs and footings for small enclosures such as toll booths, generators, and drum reels

5.2 Standards and guidelines

The below standards and guidelines will be adopted:

- FNQROC Development Manual version 9, standards and specifications
- National Construction Code (NCC).
- AS1170 Structural Design Actions.
- AS1428 Design for Access and Mobility.
- AS1657 Fixed platforms, walkways, stairways and ladders - Design, construction and installation.
- AS3600 Concrete Structures.
- AS4100 Steel Structures.
- AS4997 Design of Maritime Structures.
- AS5100 Bridge Design.
- AS2758.6 Aggregates and rock for engineering purposes.
- AS4678 Earth retaining structures.

5.3 Design Life and Importance Level

Unless noted otherwise, all structural elements will adopt the following:

- Design life = 50 years
- Importance level = 2 (normal)

5.4 Design Loads

Table 11 outlines the minimum design loads for structures.

Table 11 – Structural Design Loads

Dead Loads		
Concrete	Precast	26 kN/m^3
	Cast-in-situ	25 kN/m^3
Steel	Mild Carbon Steel	77 kN/m^3
Load Factors	ULS	1.2, 0.9
	SLS	1.0
Live Loads		
Pedestrian loading	Pedestrian live load	5 kPa
Vehicular loading	Vehicle live load	SM1600
Wind Loads		
ARI	ULS	500 years
	SLS	25 Years
Region	C	

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Flood Loads		
As per AS4997 section 5, to be determined through hydraulic modelling during the design stage	Event ARI	TBD
	Level (m AHD)	TBD
	Velocity (m/s)	TBD
Vessel Loads		
As per AS4997 section 5 and AASHTO	Unladen Mass (tons)	370
	Laden Mass (tons)	480
	Operating Velocity (m/s)	2
	Maximum Velocity (m/s)	4
	Draft (empty) (m)	0.46
	Draft (laden) (m)	0.6
	Dimensions (m)	63.73x17.3x1.75

Combination load cases and serviceability deflection limits shall be in accordance with the relevant Australian Standard for the structure in question.

5.5 Foundations

Geotechnical report 22092AA-D-R01-v2 by Geo|Design shall be used for the design of all structural foundations. Additional testing and reporting have been recommended to be performed throughout the design stage and will be incorporated.

Foundations for lightly loaded structures shall be pad footings or shallow piers and shall be founded on soil with an allowable bearing capacity of 100 kPa.

Foundations for ferry piles, anchor points and cable piles shall be driven tubular steel piles.

Ultimate and serviceability loads, target founding levels and strata, allowable deflections and bearing capacities shall be specified on the drawings for confirmation in-situ by suitably qualified piling contractors. Pile testing in the form of PDA and PDM testing shall be specified and performed during construction to verify capacities.

A geotechnical strength reduction factor of 0.5 shall be adopted for the design of all foundations; however, this may be increased during construction, subject to pile testing regimes.

5.6 Durability

General concrete and steel durability requirements are outlined in Table 12. The exposure classification and appropriate requirements for each structural component shall be confirmed during design.

Table 12 – Minimum Durability Requirements

Component	Exposure	Minimum Durability Requirement	Standard
Concrete Below Ground	B2	50 MPa Concrete Strength, 65 mm Cover	AS 3600
Concrete Above Ground	B2	50 MPa Concrete Strength, 50 mm Cover	AS 3600
Concrete in tidal zone	C2	50 MPa Concrete Strength, 65 mm Cover	AS 3600
Painted Steel Above Ground	Category C4	Table 6.3 Coating System Selected for 25 years to first maintenance.	AS 2312.1
Galvanized Steel Above Ground	Category C4	HDG600 to AS/NZS 4680	AS 2312.2 & AS/NZS 4680
Steel in tidal zone	Category C5	Specialist marine system such as Denso Seashield or similar	N/A

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5.7 Proprietary Items

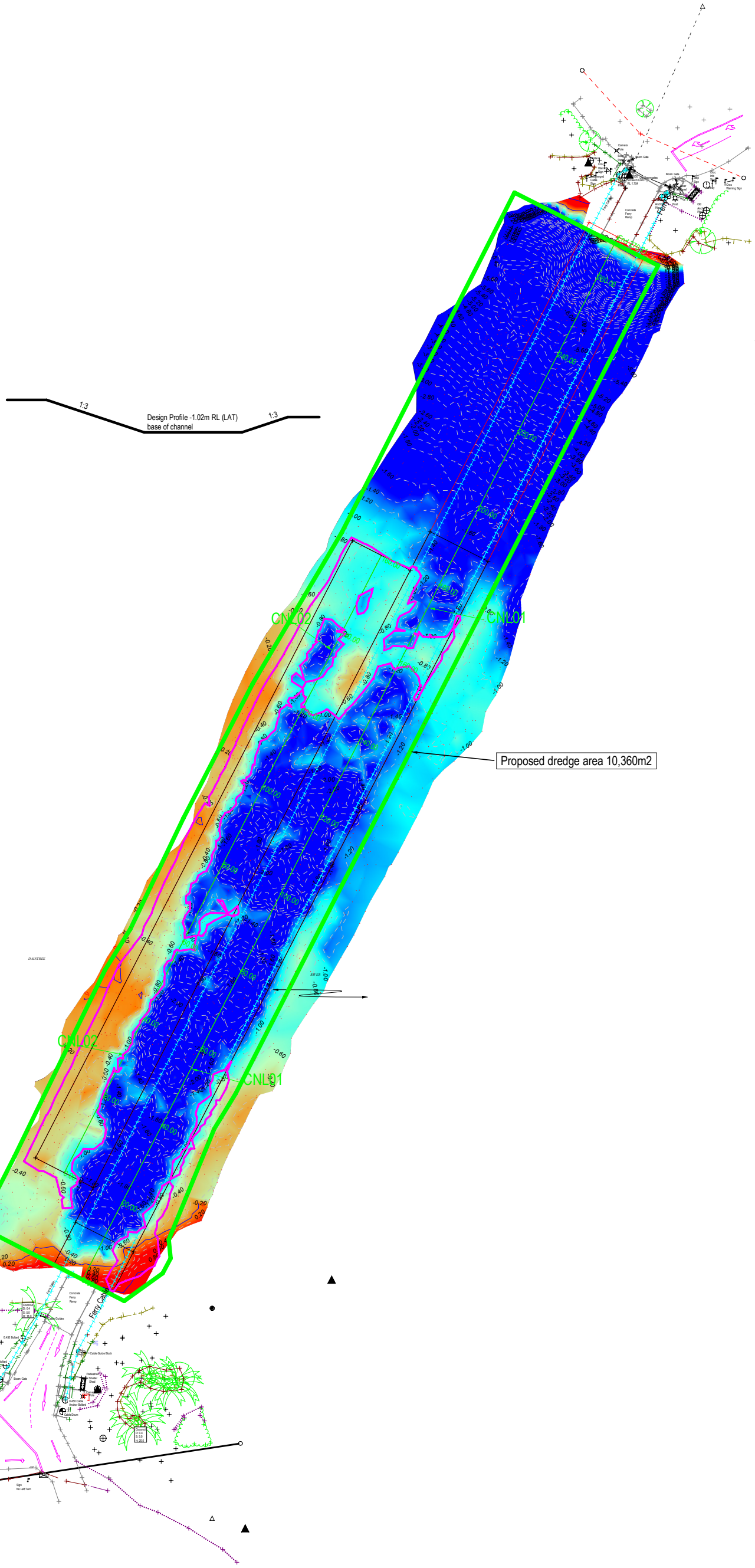
The following proprietary items shall be designed and supplied by the manufacturer. Minimum performance requirements shall be stated on the drawings.

- Toll booth demountable buildings
- Cold-formed steel shed for generator enclosure
- Security gates
- Retractable bollards

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Appendix H

Proposed dredge area, by RPS



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5. The title boundaries as shown hereon were not marked at the time of survey and have been determined by plan dimensions only and not by field survey.

6. Underground services have not been plotted or have been plotted from records and are approximate only.
   Prior to any demolition, excavation or construction on the site, the relevant authority should be contacted for possible location of further underground services and detailed locations of all services.

NOTES

Level Datum: LAT Vide RPS plan AU05051-16
Origin of Levels: PM123249

Contour Interval:0.2m
Index:1.0m

Origin of Coordinates: GDA2020

Meridian: MGA Zone 55

Field/Level Book:

0 25 50
metres

SCALE 1:500 IS APPLICABLE ONLY TO THE ORIGINAL SHEET SIZE (A1).
(1:1000 @ A3)

AMENDMENTS	
TEXT	
CHECKED	
DRAFTING CHECKED	
PROJECT MANAGER	PC OCK
SURVEYED	AD 14/4/25
DRAWN	DGP
CAD REF	AU017394-100.mjo
SHEET OF SHEETS	1 OF 1
SHEET SIZE	A1

Douglas Shire Council

Proposed Dredge Area
Daintree River Ferry Crossing
Daintree River
Cape Tribulation Road

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SCALE	DATE	DRAWING NO.	ISSUE
1:500	4/6/25	AU17394-100	

Appendix I

Geotechnical Investigation by GEO Design

GEO | design

ISO 9001
ISO 14001
ISO 45001
BUREAU VERITAS
Certification

REPORT

Geotechnical Investigation

Daintree Ferry Infrastructure Improvements
Daintree QLD 4873



22092AA-D-R01-v2
Douglas Shire Council
10 January 2023

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Appendix B	Results of Fieldwork
Appendix C	Results of Laboratory Testing

1.0 Introduction

GEO Design has carried out a geotechnical investigation for Douglas Shire Council's proposed Daintree Ferry Infrastructure Improvements scheme. The geotechnical investigation was carried out at the request of Robert Latham on behalf of Douglas Shire Council in general accordance with the provided brief and GEO Design's proposal P220914-P01-v1 dated 14 October 2022.

Based on the information provided, it is understood the following improvements to the Daintree Ferry are proposed:

- Construction of two new concrete landing aprons, south & north sides of the crossing (the same location as existing, but wider for exit/entry and dual loading/unloading of the ferry).
- Installation of new concrete piles to connect steel ferry cable on both the south and north sides of the crossing.
- Installation of a new river mooring pile on the southern side of the Daintree River.
- Widening of the entry area on the southern side of the crossing to form three lanes extending from the sweeping bend near tourist carpark to ferry loading boom gate.
- Construction of a new ferry exit lane and widening works to create a total of two exit lanes on the southern side of the crossing.
- Lane widening to create two exit lanes and two entry lanes on the northern side of the crossing.

Given the above, the aims of the geotechnical investigation were as follows:

- Evaluate the subsurface conditions in the areas of the proposed improvements and new structures.
- Comment on piles for mooring including suitable depths of embedment and geotechnical design parameters to allow structural design.
- Comment on piles or anchors for fastening ferry cables including types, recommended depths, lateral capacity, and geotechnical design parameters to allow structural design.
- Comment on ground improvement options if suitable.
- Comment on durability and corrosion requirements to ensure suitable long term design life.
- Provide subgrade CBR values to allow pavement design.
- Comment on pavement design recommendations.
- Comment on erosion and scour protection measures to be considered.
- Comment on concrete pavement thicknesses and construction including cut off walls and subgrade preparation.

- Comment on the likely presence of Acid Sulfate Soils and their potential disturbance including comments in relation to local and state planning requirements.
- Comment on earthworks procedures and site preparation.

The results of the investigation together with the engineering comments outlined above are presented in the following sections.

2.0 Fieldwork

The fieldwork for the current investigation comprised the following:

- A walkover assessment, carried out by an experienced Engineering Geologist.
- Excavation of nine auger holes (AH01 to AH09) using a minimum 300 mm diameter auger on a rubber tracked excavator to depths of between about 1.5 m to 2.4 m. Dynamic Cone Penetrometer (DCP) tests was carried out adjacent to each test pit.
- Drilling of three geotechnical boreholes (BH01 to BH03) with in-situ SPT/U50 sampling at 1.5 m intervals to depths of about 15 m.
- Performance of two electronic Cone Penetrometer Tests (CPT1 and CPT2) to provide additional geotechnical design data to supplement borehole data in interpretation of soil strength and geotechnical characteristics.

No overwater investigation work was carried out, in accordance with our proposal.

Fieldwork was carried out by an experienced field technician under the direction of a geotechnical engineer. The locations of all testing are presented in Appendix A and shown below in Figures 1 and 2. Co-ordinates for the test locations are summarised in Table 1.

The results of the fieldwork are presented in Appendix B.

Table 1: Summary of Test Locations*

Test Location	Easting (m)	Northing (m)	Completed Depth (m)	Approximate Surface RL (m-AHD)
AH01	328267.0	8201290.0	2.20	4.0
AH02	328331.0	8201382.0	2.10	5.0
AH03	328474.0	8201452.0	2.20	5.0
AH04	328592.0	8201481.0	2.10	6.0
AH05	328891.0	8201804.0	1.50	11.0
AH06	329080.0	8201917.0	2.20	12.0
AH07	328950.0	8201840.0	2.40	11.0
AH08	328763.0	8201518.0	2.20	10.0
AH09	328757.0	8201472.0	2.20	11.0
BH01	328749.0	8201531.0	14.95	9.0
BH02	328775.0	8201533.0	14.95	10.0
BH03	328889.0	8201801.0	14.95	11.0
CPT1	323840.0	8201518.0	18.75	10.0
CPT2	328890.0	8201801.0	19.70	11.0

*Co-ordinates in MGA2020. RL's estimated from provided site plan



Figure 1: Test Location Plan Southern Side of Crossing

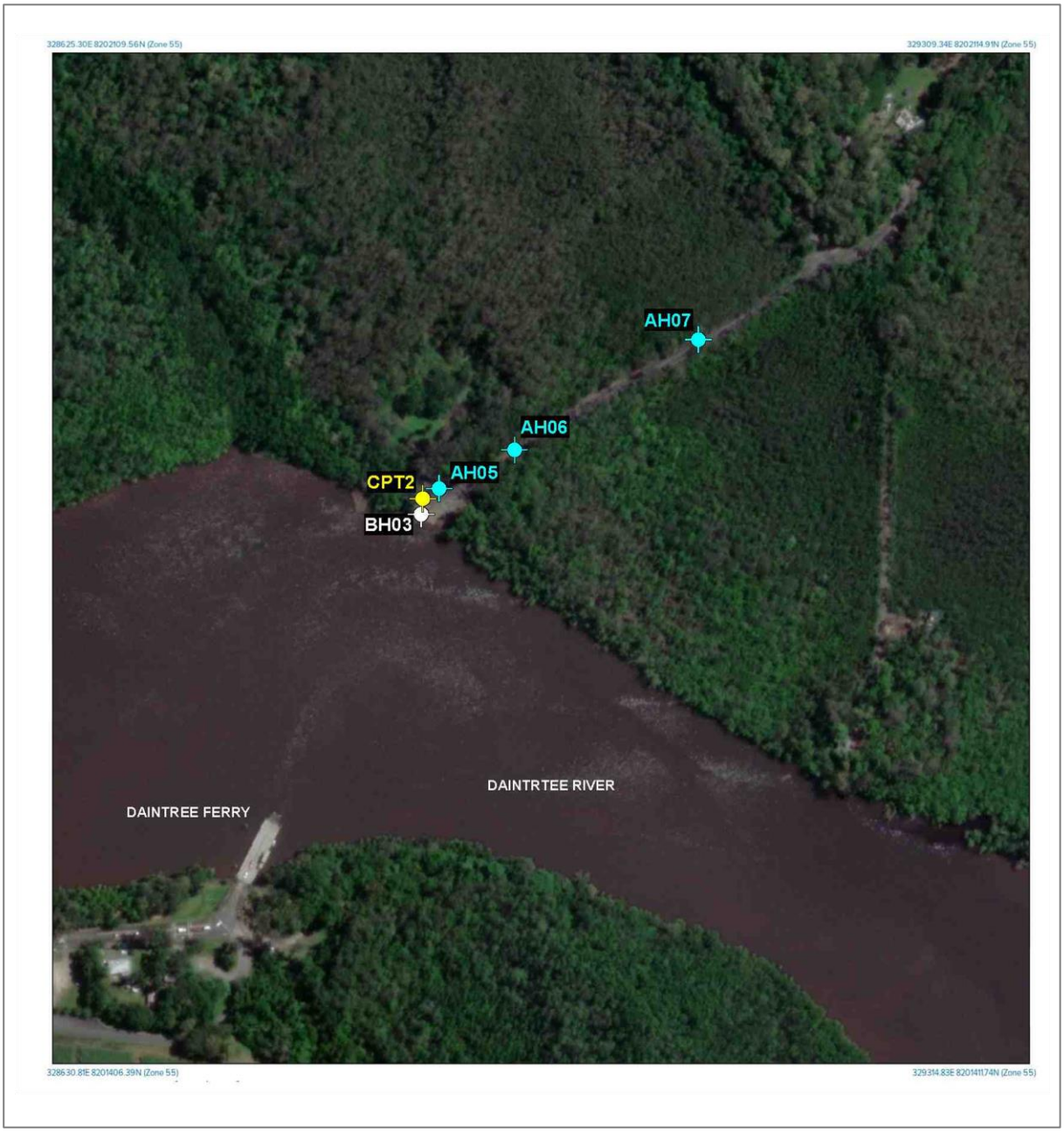


Figure 2: Test Location Plan Northern Side of Crossing

3.0 Results of Fieldwork

3.1 Surface Conditions

The proposed works covers the area surrounding the existing Daintree Ferry crossing located north of Mossman, along the Cape Tribulation Road. The existing site includes sealed access roads and hard stand areas, ferry infrastructure including cable housings and mooring structures, together with some small buildings and traffic control devices. Existing concrete ramps are located adjacent to the ferry loading areas on both the northern and southern sides of the crossing.

Photographs of the site taken during fieldwork are presented in Figure 3.



Figure 3: Site Photographs

3.2 Subsurface Conditions

3.2.1 Auger Holes

The subsurface conditions encountered within the auger holes AH01 to AH09 are outlined in the formal logs presented in Appendix B and presented pictorially in Figures 4 to 6 below.



Figure 4: Summary of AH01 to AH04 Results

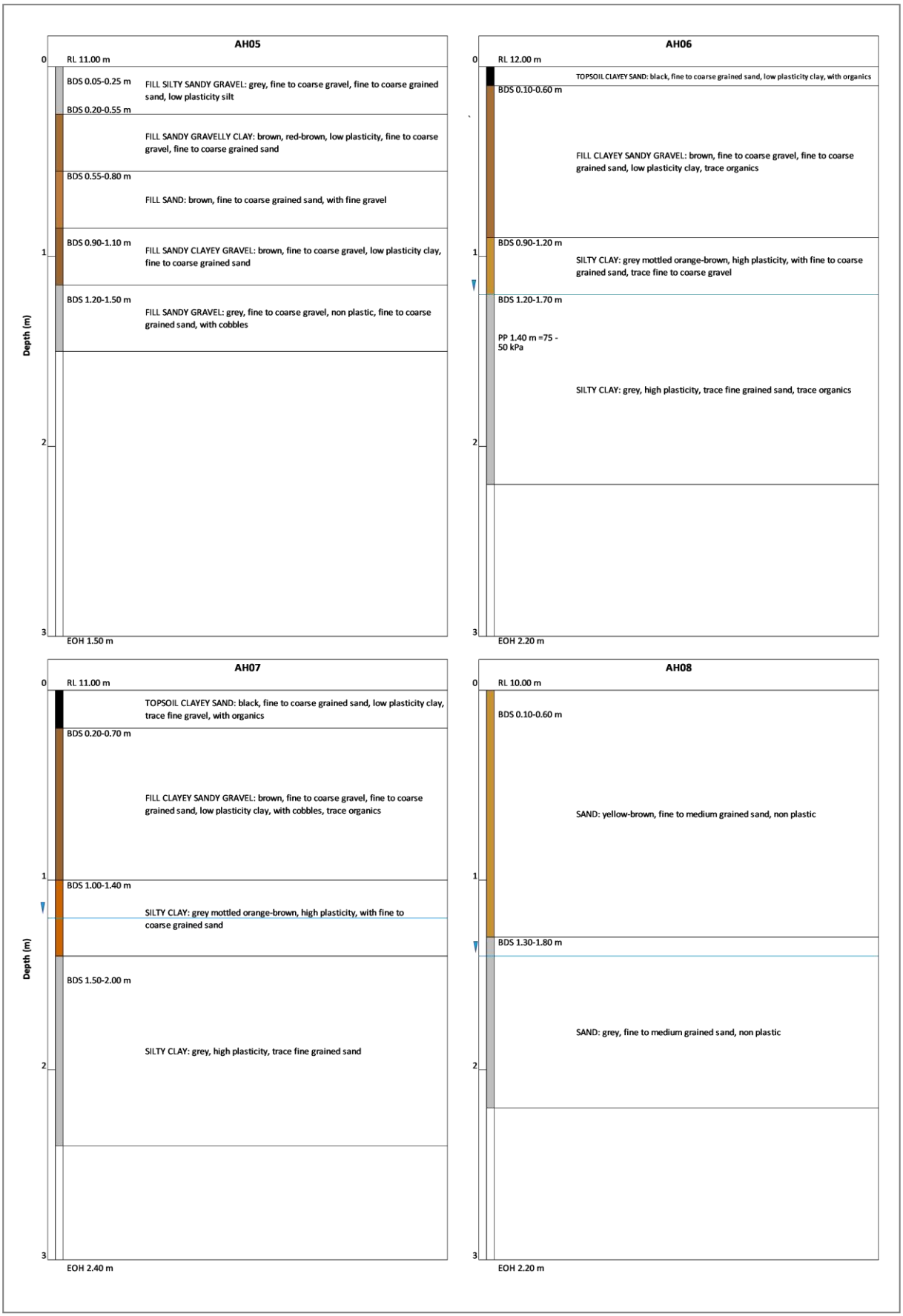


Figure 5: Summary of AH05 to AH08 Results

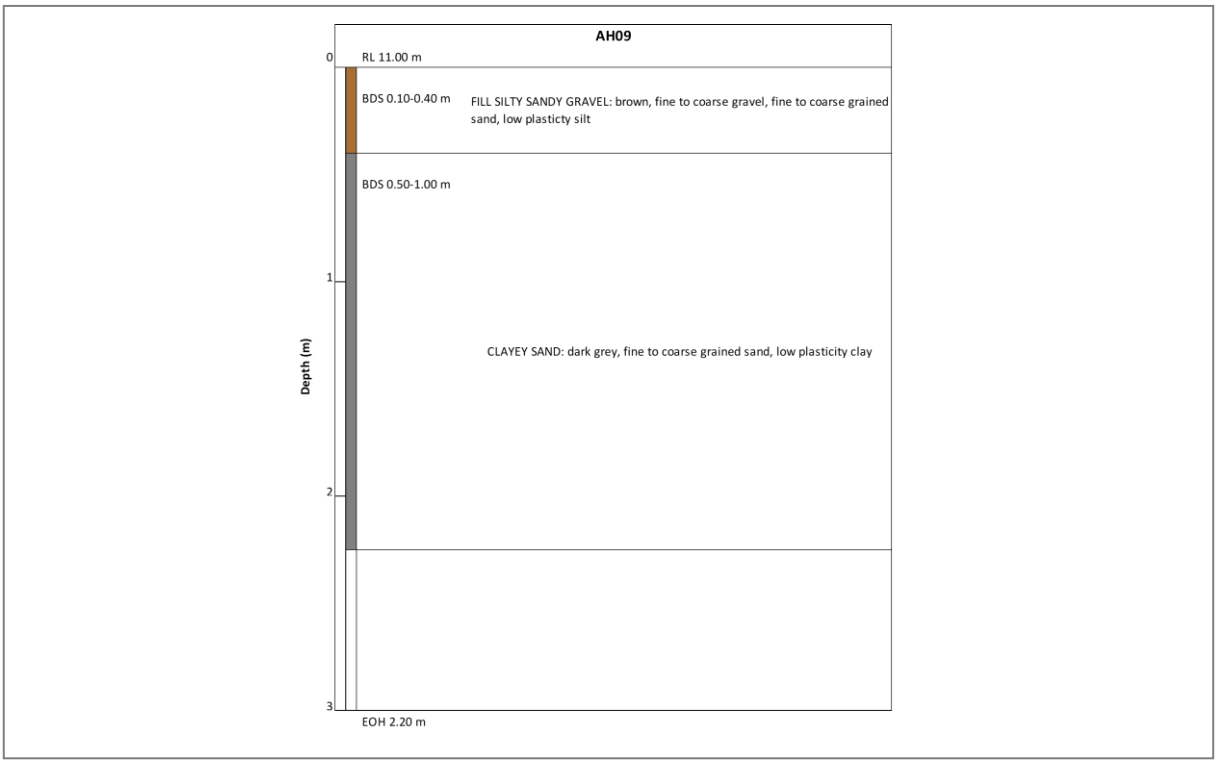


Figure 6: Summary of AH09 Results

3.2.2 Boreholes

The subsurface conditions encountered within the boreholes BH01 to BH03 are outlined in the formal logs presented in Appendix B and presented pictorially in Figure 7 below.

The subsurface conditions encountered within BH01 and BH02 located on the southern side of the crossing are summarised in Table 2 below. The subsurface conditions encountered within BH03 completed on the northern side of the crossing are summarised in Table 3.

Table 2: Summary of materials encountered within Boreholes BH01 and BH02

Depth From (m)	Depth To (m)	Material Description
0	1.8/2.3	Loose to Medium Dense Clayey/Silty SAND. Minor lense of surface clayey fill in BH01.
1.8/2.3	3.5/4.2	Soft Silty CLAY – Marine Clay
3.5/4.2	13.0/14.95*	Loose to Medium Dense SAND. Extends to bottom of hole in BH01.
13.0	14.95*	Soft Silty CLAY in BH02

Table 3: Summary of materials encountered within Borehole BH03.

Depth From (m)	Depth To (m)	Material Description
0	1.0	Variable Gravelly/Sandy/Clayey FILL
1.0	14.95*	Soft Silty CLAY – Marine CLAY

*- Maximum depth investigated.

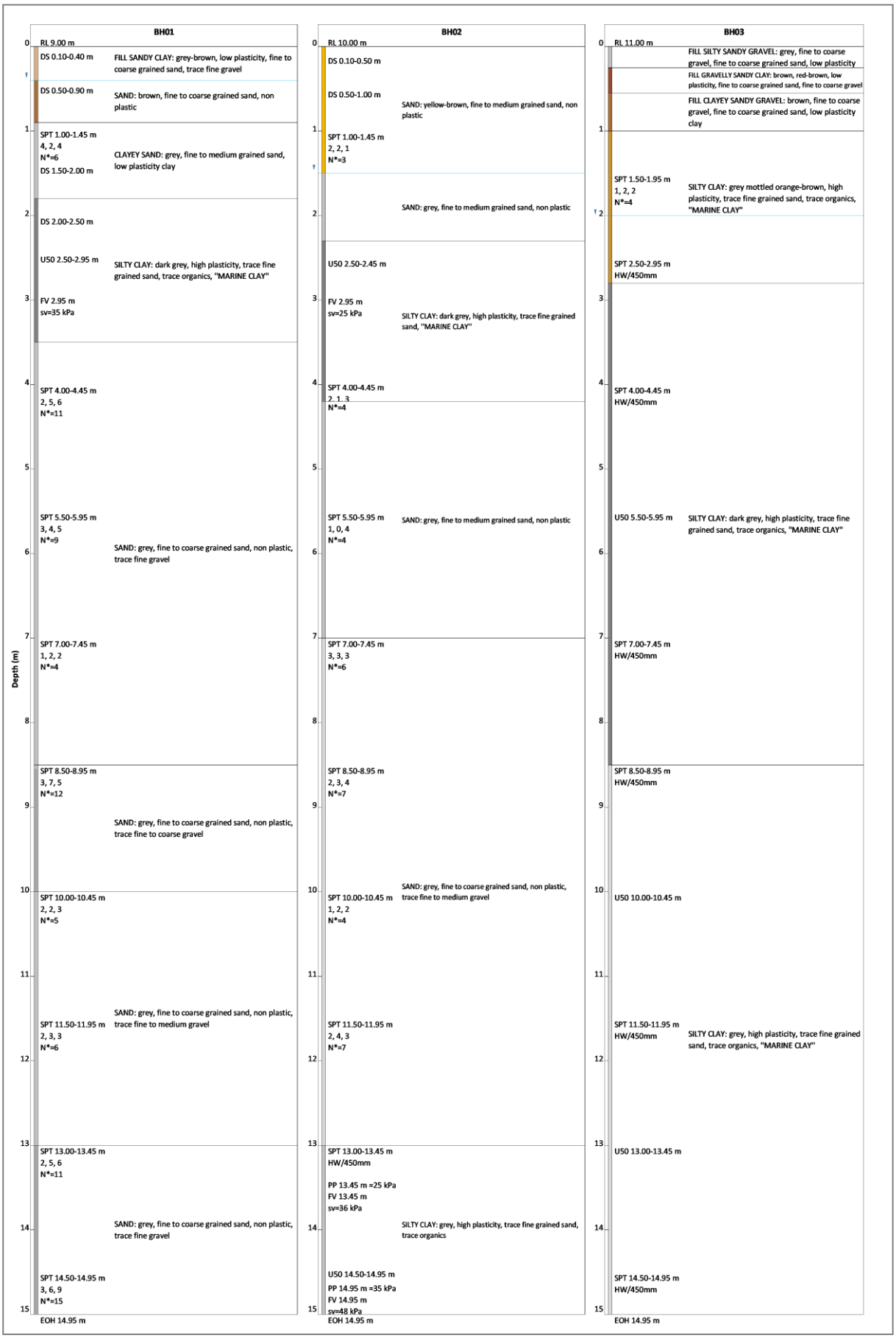


Figure 7: Summary of BH01 to BH03 Results

3.2.3 CPT's

The subsurface conditions inferred from the results of CPT1 and CPT2 are consistent with those encountered within the boreholes. However, it was inferred that CPT2 reached refusal on weathered rock at a depth of about 19.70 m. A summary of the CPT results are presented in Figures 8 and 9 below.

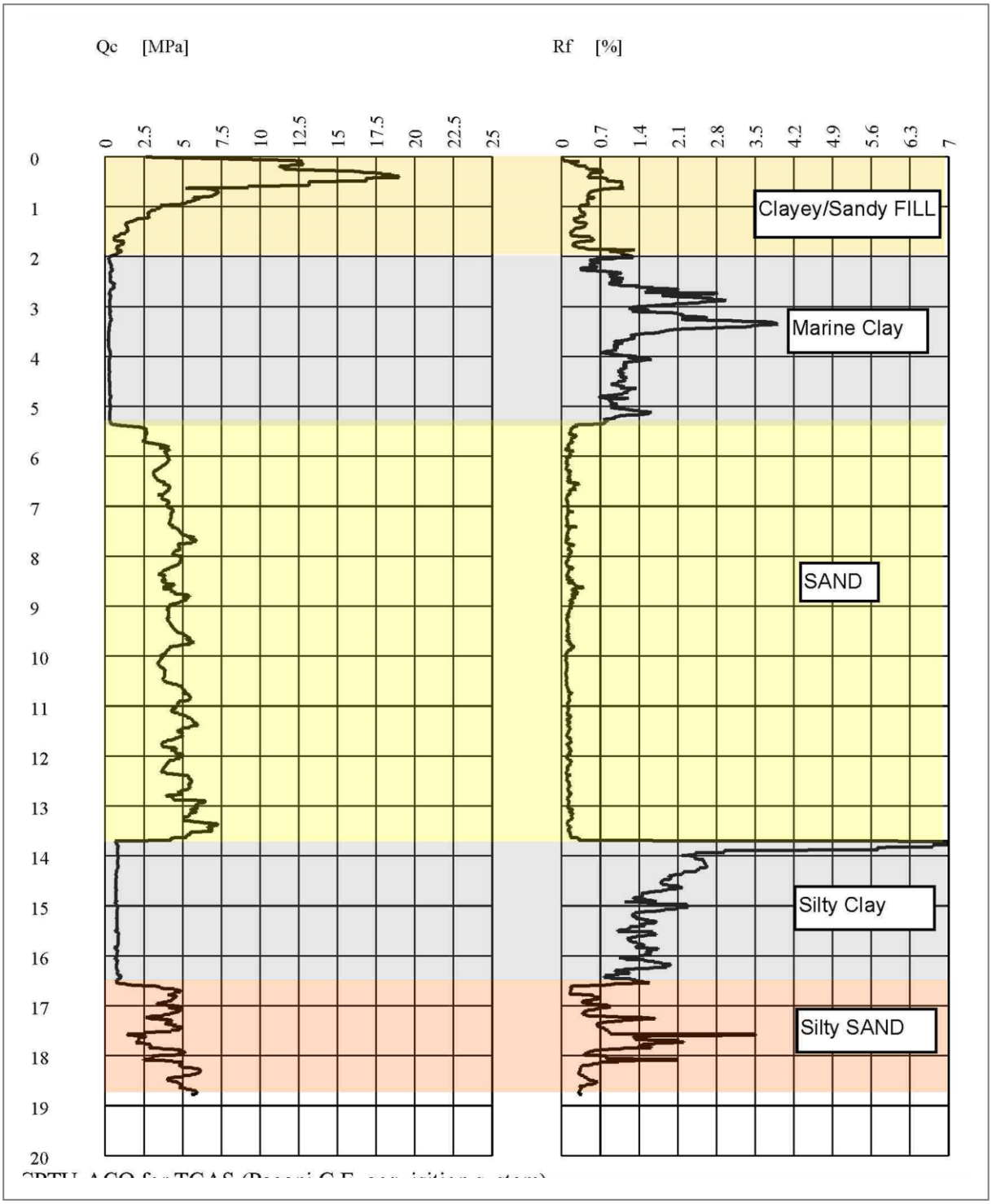


Figure 8: Summary of CPT1 Results

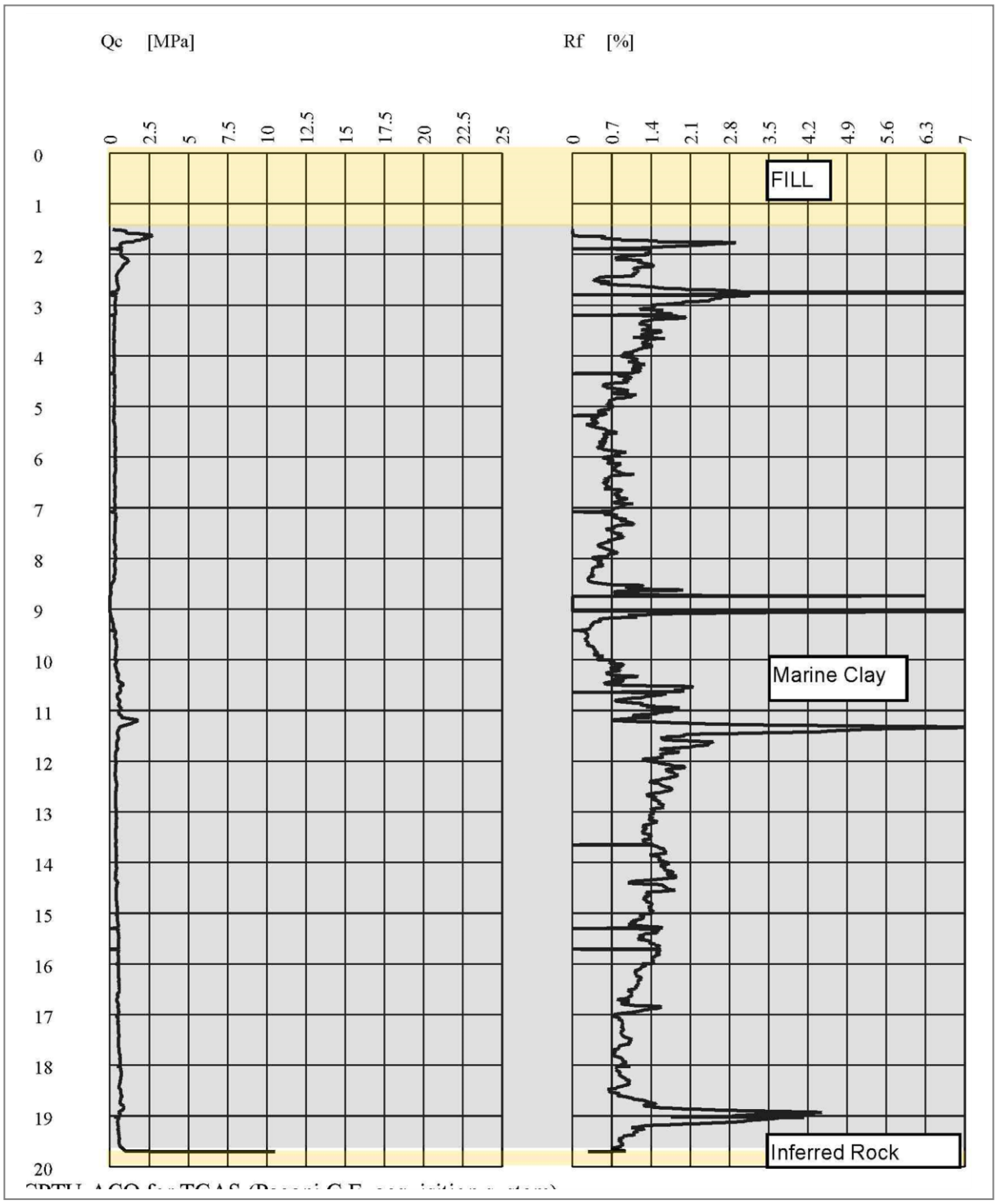


Figure 9: Summary of CPT2 Results

3.2.4 Summary

It is considered that the subsurface conditions encountered and inferred from the field testing are consistent for this area and those encountered in previous geotechnical investigations in the surrounding area.

At the time of fieldwork groundwater was encountered at depths of between about 1-2 m below the current ground level. Groundwater was not observed in some of the test locations.

It is expected that groundwater levels at the site will fluctuate throughout the year based on rainfall events and tidal variations. It Is not uncommon for ground water to reach near surface levels (<1 m) following periods of prolonged rainfall, particularly when coinciding with high tides.

4.0 Laboratory Testing

4.1 Geotechnical Testing

Some samples collected within the test holes were selected for laboratory testing. Geotechnical laboratory testing generally comprised moisture content, Atterberg Limits, grading and soaked CBR testing. The results of the geotechnical laboratory testing are presented in Appendix C. The laboratory testing was carried out by Earth Test and Soil Engineering Services in their NATA accredited laboratories.

A summary of the results are presented in Tables 4 and 5 below.

Table 4: Summary of Geotechnical Laboratory Testing

Test Location	AH01	AH02	AH03	AH04	AH05
Depth (m)	0.2-0.7	1.2-1.7	0.1-0.5	0.1-0.4	0.25-0.55
Moisture Content	8.6	32.4	6.6	11.5	7.8
Liquid Limit (%)	34	30	24	26	29
Plastic Limit (%)	26	23	20	22	19
Plasticity Index	8	7	4	4	10
Linear Shrinkage (%)	3	4	2	3	5
% <0.075 mm	26	79	19	29	27
CBR (%)	25	6	20	20	14

Table 5: Summary of Geotechnical Laboratory Testing

Test Location	AH06	AH07	AH08	AH09
Depth (m)	0.1-0.6	0.1-1.4	0.1-0.6	0.1-0.4
Moisture Content	9.3	53	NT	6.1
Liquid Limit (%)	31	37	26	24
Plastic Limit (%)	22	27	23	20
Plasticity Index	9	10	3	4
Linear Shrinkage (%)	3	3.5	0	2
% <0.075 mm	34	54	7	18
CBR (%)	12	4.0	20.0	11

4.2 Chemical Testing

Samples were also selected for chemical analyses to evaluate the potential aggressiveness of the predominant soils to concrete. The laboratory testing was carried out by SGS Australia in their NATA accredited laboratory.

The results of the laboratory testing is presented in Appendix C and summarised in Table 6 below

Table 6: Summary of Chemical Laboratory Testing

Test Location	BH02	BH03
Sample Depth (m)	5.5-5.95	4.0-4.45
pH (1:2)	5.1	8.1
Conductivity (1:2) @25 C (µS/cm)	1000	3100
Resistivity (1:2) (ohm m)	10	3
Chloride (water extractable 1:2) (mg/kg)	480	2400
Sulfur, S (mg/kg)	68	69
Sulfur as Sulfate, SO4 (mg/kg)	200	210

5.0 Engineering Comments

5.1 General

As outlined previously, it is understood that the proposed Daintree Ferry Infrastructure Improvements scheme generally comprises the following:

- Construction of two new concrete landing aprons, south & north sides of the crossing (the same location as existing, but wider for exit/entry and dual loading/unloading of the ferry).
- Installation of new concrete piles to connect steel ferry cable on both the south and north sides of the crossing.
- Installation of a new river mooring pile on the southern side of the Daintree River.
- Widening of the entry area on the southern side of the crossing to form three lanes extending from the sweeping bend near tourist carpark to ferry loading boom gate.
- Construction of a new ferry exit lane and widening works to create a total of two exit lanes on the southern side of the crossing.
- Lane widening to create two exit lanes and two entry lanes on the northern side of the crossing.

At the time of reporting, further details of proposed structures or preferred construction methodologies were not known.

Engineering comments relating to site preparation and earthworks procedures, foundation options, expected settlements under fill and building loads, piling and anchor works, sediment and erosion control and pavement design recommendations are presented in the following sections.

5.2 Mooring Pile

It is understood that a mooring pile on the southern side of the crossing is proposed to allow safe anchoring of the ferry and other vessels as required. Based on the subsurface conditions encountered within boreholes BH01 and BH02 together with the inferred conditions from CPT1, the area is dominated by some filling and Soft Marine Clay to depths of about 3.5/4.2 m, over Loose to Medium Dense SAND to depths of 13.0 m to >14.45 m.

It is considered that a driven pile is the most likely for this application, however consideration could be given to a bored pile similar to that of a Continuous Flight Auger (CFA) type of pile. Piles should extend at least three times their diameter into the Loose to Medium Dense SANDS below a depth of 3.5/4.2 m.

For piles installed in this manner, the unfactored ultimate loadings ($R_{d,ug}$) are summarised in Table 7. The upper 1 m of the pile shaft should be neglected in calculating total shaft friction capacity.

Table 7: Unfactored Ultimate Loadings

Pile Type	Ultimate End Bearing Capacity	Ultimate Shaft Friction
Driven Piles	1700 kPa	70 kPa
Bored Piles	1200 kPa	40 kPa

The design geotechnical strength ($R_{d,g}$) may then be obtained after multiplying $R_{d,ug}$ by a geotechnical strength reduction factor (ϕ_g). Based on the overall design average risk rating (ARR) as outlined in AS 2159-2009, a ϕ_g value of 0.48 to 0.52 is suggested for the design of piles at this site.

A higher geotechnical strength reduction factor may be applied if the installed piles are subjected to load testing to confirm pile capacities.

For working stress design of piles, the unfactored ultimate end bearing and skin friction values may be divided by a factor of safety of 2.5 in order to obtain the allowable working pressures.

For piles, it is suggested that specialist contractors be approached to comment on predicted vertical and lateral capacity for their pile types, ability to penetrate soil layers, and the possibility of vibrations affecting nearby structures.

The lateral capacity of the pile can be estimated using the reaction modulus (E_{py}) The reaction modulus is defined as the resistance from the soil at a point along the depth of the pile divided by the horizontal deflection of the pile at that point. The reaction modulus is a function of the pile deflection (y) and the depth below the ground (z). The reaction modulus can be calculated using the secant of the p-y curve.

For estimation of the lateral capacity of the pile using the values provided in Table 8 can be used.

Table 8: Design Parameters for Lateral Pile Capacity

Material Description	Dry Density γ	ε_{50}	k_{py}	Friction ϕ	Undrained Shear Strength	Poisson's Ratio
Loose to Medium Dense Sand	16 kN/m^3	-	8 MN/m^3	34°	-	0.3
Soft Clays	10 kN/m^3	0.020	-	-	20 kPa	0.25

5.3 Concrete Piles for Steel Cable Connection

It is understood that concrete piles are proposed to provide anchors for connection and support of the steel ferry cable on both the northern and southern sides of the crossing.

It is envisaged that these piles will predominantly provide lateral support for the cable. On this basis, the design capacities for lateral pile capacity outlined in Table 9 should be used for concrete piles on the northern and southern side of the crossing.

Alternatively, to concrete piles, mass structures such as fully or partially buried concrete "dead men" or similar could be used. In these circumstances the concrete dead-men act as gravity structures and rely on its mass and the lateral bearing capacity of the soil.

For these structures an allowable horizontal bearing pressure of 150 kPa could be adopted for the Loose to Medium Dense SAND and 50 kPa for the Soft clay soils. Allowable vertical bearing pressures of 100 kPa for the Loose to Medium Dense SAND and 50 kPa for the soft clay could be adopted.

5.4 Flexible Pavement – South Side of Crossing (Sweeping Bend to Ferry Boom Gate)

The subgrade CBR values estimated from the near surface samples in this area generally varied between about 20-25%. A soaked CBR value of 6% was estimated for the Firm to Stiff Silty Sandy CLAY encountered at a depth of 1.2-2.1 m below the ground surface in auger hole AH02.

Based on the result and in accordance with the Austroads guidelines, it is recommended that a subgrade CBR of 15% could be adopted for the design of flexible pavements formed on the existing fill or natural sandy subgrade soils.

5.5 Flexible Pavement – South Side of Crossing Ferry Exit Lanes

The subgrade CBR values estimated from the existing road embankment formation from auger holes AH08 and AH09 generally varied between about 11-20%.

Based on the result and in accordance with the Austroads guidelines, it is considered that a subgrade CBR of 10% could be adopted for the design of flexible pavements formed on the existing road embankment fill.

5.6 Flexible Pavement – North Side of Crossing

The subgrade CBR values estimated from the existing road embankment formation from auger holes AH05 to AH07 generally varied between about 4-14%.

Based on the result and in accordance with the Austroads guidelines, it is considered that a subgrade CBR of 5% could be adopted for the design of flexible pavements formed on the existing road embankment fill.

5.7 Concrete Pavements/Landing Aprons

It is understood that new concrete aprons are proposed for both the northern and southern sides of the crossings. It is further understood that the new aprons are to be in the same position as the existing landings but wider for dual loading and unloading of the ferry.

Based on the results of the investigation and in accordance with the Austroads guidelines, a subgrade CBR of 10% could be adopted for the design of the concrete landings.

It is further recommended that a minimum 150 mm of bound subbase be incorporated into the pavement/landing design.

It is envisaged that the proposed landings will be founded near the existing surface within the existing fill materials. As such, the landings can be designed using an assumed allowable bearing pressure of 80 kPa.

It is recommended that all new concrete landings incorporate vertical cut off walls around their perimeter. The cut off walls should be a minimum of 300 mm wide and 800 mm deep (measured from the finished surface of the concrete landing).

5.8 Cut and Fill Earthworks

It is envisaged that cut and filling earthworks will be required as part of the proposed improvements.

Where required, site preparation and earthworks procedures should involve the following:

- Strip and remove existing debris/materials, topsoil and soil containing significant amounts of organic materials.
- Strip and remove all cobble and boulders >150 mm in diameter from the surface.
- Compact the subgrade with a heavy roller to reveal soft or loose materials. Soft or loose material that cannot be improved by compaction should be removed and replaced with engineered fill.
- Place fill where required in uniform horizontal layers not exceeding 200 mm loose thickness and compact to achieve a relative dry density ratio of at least 95% using Standard Compaction. Each layer of filling should be keyed into natural ground. Filling should be placed at least 1 m beyond the design profile and then trimmed to the design profile.

If required, imported fill materials should have a Plasticity Index less than 20 and a soaked CBR value of >15%.

It is recommended that all earthworks' procedures be carried out in accordance with AS 3798-2007 "Guidelines on Earthworks for Commercial and Residential Developments" and local authority requirements. It is recommended that the earthworks contractor be familiar with site conditions.

5.9 Settlements Under New Filling Loads

The placement of additional fill over portions of the site will result in settlement within the soft compressible marine clay encountered near the crossing on both the northern and southern sides. As a guideline, the placement of 1 m of filling is likely to result in up to about 60-80 mm of settlement, with higher settlements expected for filling placed on the northern side of the crossing. Differential settlements are likely to be in the order of 50% of the total estimated settlement.

5.10 Lateral Earth Pressures

If required, new retaining walls or similar structures could be designed using the at rest (K_0), active (K_a) and passive (K_p) earth pressure coefficients outlined in Table 9.

Table 9: Retaining Wall Earth Pressure Co-efficients

Material Description	K_0	K_a	K_p
Loose to Medium Dense Sand	0.35	0.55	2.75
Soft to Firm Clay	0.60	0.75	NA

All retaining walls should include any surcharge loads imposed on the walls. All retaining walls should be designed by a Structural Engineer.

5.11 Aggressiveness to Concrete

Based on the results of the chemical testing, it is considered that the existing soils show a low aggressiveness to concrete. However, given the position of the proposed structures, it is considered that all concrete structures should be designed with a Class B2 exposure classification in accordance with AS 5100.

5.12 Acid Sulfate Soils

The results of the investigation, together with our experience with similar sites in this area, indicate that the darkly hued marine clays and sands are likely to be Potential Acid Sulfate Soils (PASS). If substantial excavation of these materials is proposed, further evaluation of PASS may be required.

5.13 Scour and Erosion Protection

It is recommended that scour and erosion protection be placed around new structures, particularly the new concrete landings and ferry approaches. The scour protection should comprise the placement of a geofabric layer (Bidim A34 or better) over the subgrade, covered by at least 450 mm of crushed rock ranging in size between about 150 mm to 300 mm. The scour rock should be in accordance with the requirements of the FNQRoC or Department of Transport and Main Roads guidelines.

Scour protection in the form of crushed rock (75-150 mm in size) should also be placed within the table drains formed on the northern road works and where surface water flow is concentrated.

5.14 Working Platform

It is envisaged that working platforms will need to be put in place to allow construction of some structures and the concrete landings. A typical working platform could comprise the placement of geofabric or geogrid reinforced geofabric (Tensar) on the exposed subgrade followed by the placement of 40-70 mm crushed rock. A minimum thickness of 100-150 mm of crushed rock is recommended.

If required, reinforced working platforms for the placement of piling equipment could comprise Tensar geogrid reinforced geofabric covered by a crushed quarry product (-70 mm). At least three layers of the Tensar reinforced geofabric should be adopted (located at subgrade level, and then at 150 mm and 300 mm heights) with 150 mm layers of crushed rock placed over and in between the geofabric layers.

With the adoption of the above reinforced working platform, allowable bearing pressures of over 250 kPa can be readily achieved.

6.0 Limitations

GEO Design has prepared this report for the use of Douglas Shire Council for design purposes in accordance with generally accepted geotechnical engineering practices. No other warranty, expressed or implied, is made as to the professional advice included in this report. This report has not been prepared for use by parties other than Douglas Shire Council and their other consultants. It may not contain sufficient information for purposes of other parties or for other uses.

Your attention is drawn to the document - “Important Information About Your Geotechnical Engineering Report”. This document has been prepared by the ASFE (Professional Firms Practicing in the Geosciences). The statements presented in this document are intended to advise you of what your realistic expectations of this report should be, and to present you with recommendations on how to minimise the risks associated with the ground works for this project. The document is not intended to reduce the level of responsibility accepted by GEO Design Pty Ltd, but rather to ensure that all parties who may rely on this report are aware of the responsibilities each assumes in so doing.

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We would be pleased to answer any questions that you may have regarding this matter.

Regards,



Steve Ford

Principal Geotechnical Engineer
BSc (Geo) BSc Hons (Geo) MEngSc (Geotechnical) MMinEng (Geomechanics)
RPEQ 25762

Appendix A

Site Plans

LEGEND

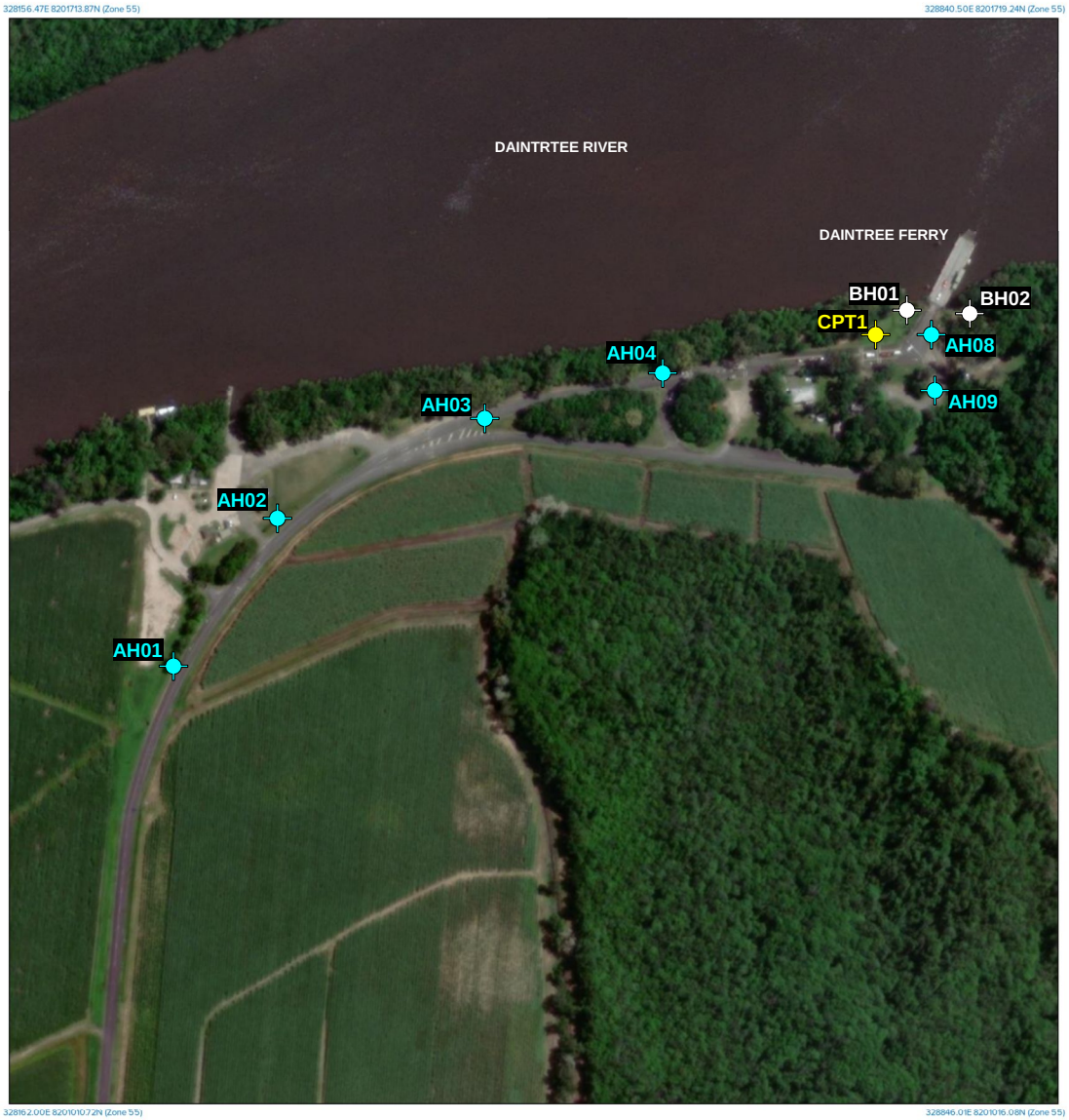
BH01 - Approximate BH01 Location

CPT1 - Approximate CPT1 Location

AH01 - Approximate AH01 Location



SITE PLAN DEVELOPED FROM QUEENSLAND GLOBE



N
W E
S

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Client: DOUGLAS SHIRE COUNCIL	**GEOTECHNICAL INVESTIGATION**
Drawn: SRF	**DAINTREE FERRY INFRASTRUCTURE IMPROVEMENTS**
Scale: NTS	**FIGURE 1** **SITE PLAN - SOUTHERN SIDE OF CROSSING**
Ref No: 22092AA-D-FIGURE1-V1	

LEGEND

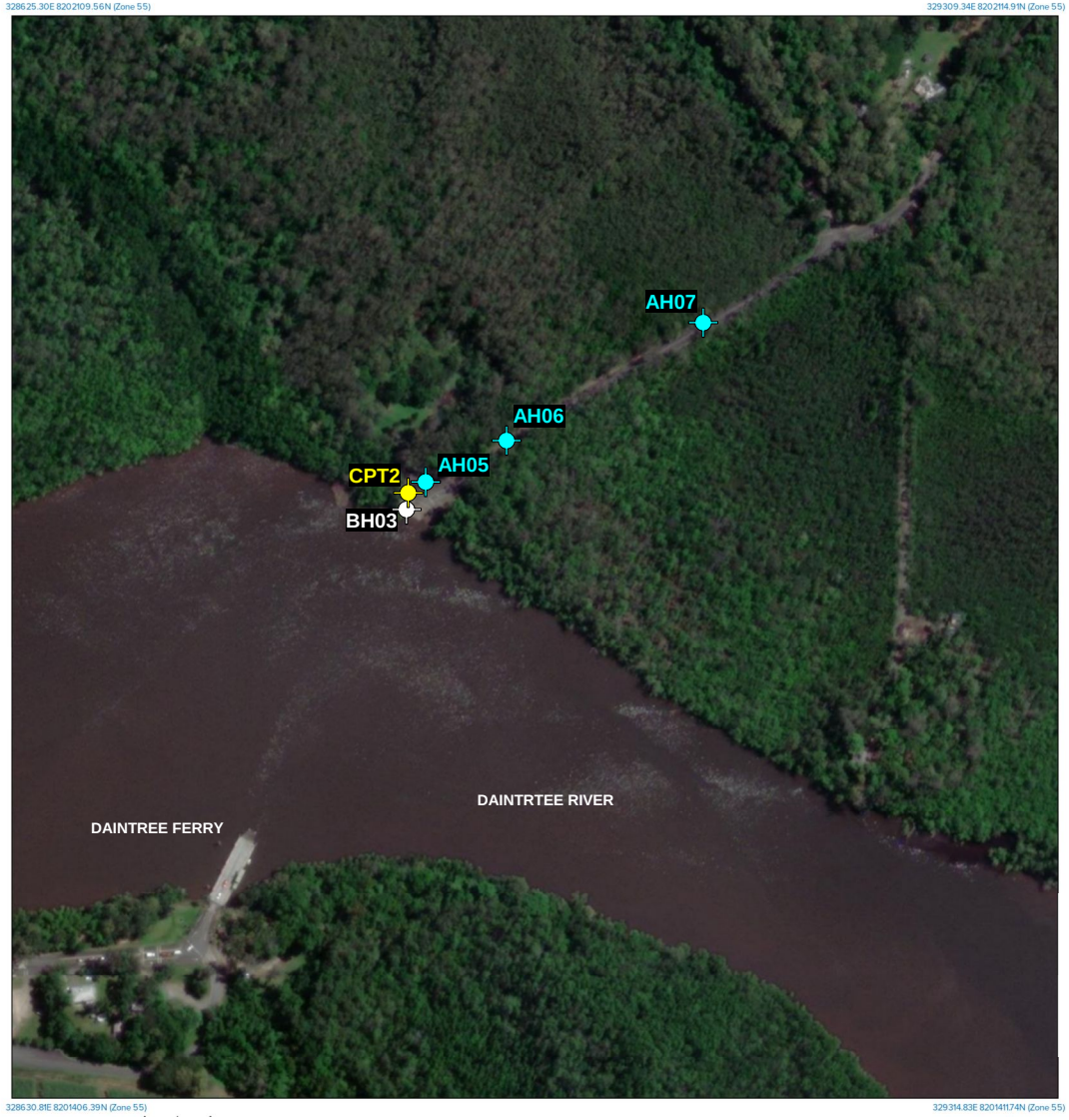
BH03 - Approximate BH03 Location

CPT2 - Approximate CPT2 Location

AH05 - Approximate AH01 Location



SITE PLAN DEVELOPED FROM QUEENSLAND GLOBE



N
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Client: DOUGLAS SHIRE COUNCIL	**GEOTECHNICAL INVESTIGATION**
Drawn: SRF	**DAINTREE FERRY INFRASTRUCTURE IMPROVEMENTS**
Scale: NTS	**FIGURE 2** **SITE PLAN - NORTHERN SIDE OF CROSSING**
Ref No: 22092AA-D-FIGURE2-V1	

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Appendix B

Results of Fieldwork

BOREHOLE: AH01

investigate | design | construct

Project	Geotechnical Investigation	East	328267.0 m		
Site	Daintree Ferry	North	8201290.0 m MGA2020 55	Sheet	1 OF 1
Location	Daintree	Surface RL	4.00 m AHD		
Position	Refer to Site Plan	Contractor	Geo Design	Date Started	23/11/22
Job No.	22092AA-D	Drill Rig	4-6t Excavator	Date Completed	23/11/22
Client	Douglas Shire Council	Inclination	-90°	Logged	DLH

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
ADT	L-M	Not Observed	0.0	4.00				GC	FILL CLAYEY SANDY GRAVEL: brown, fine to coarse gravel, fine to coarse grained sand, low plasticity clay, with cobbles	D	MD	
			0.5		BDS 0.20-0.70 m							
			1.0	*1.10*								
				2.90	BDS 1.10-1.60 m			CH	CLAY: grey mottled orange-brown, high plasticity, trace fine grained sand	M	F to St	
			1.5		PP 1.20 m =75 kPa							
					PP 1.50 m =70 kPa							
			2.0	*2.20*					BOREHOLE TERMINATED AT 2.20 m Target depth			
			2.5									
			3.0									
			3.5									

Comments

Checked SRF

Date 2/12/22

MFC_LIB_03.GLB Log MFC SOIL BOREHOLE 22092AA-D DSC - DAINTREE FERRY.GPJ <<DrawingFile>> 01/12/2022 14:27 8.30.003 Developed by Datgel

BOREHOLE: AH02

investigate | design | construct

Project	Geotechnical Investigation	East	328331.0 m		
Site	Daintree Ferry	North	8201382.0 m MGA2020 55	Sheet	1 OF 1
Location	Daintree	Surface RL	5.00 m AHD		
Position	Refer to Site Plan	Contractor	Geo Design	Date Started	23/11/22
Job No.	22092AA-D	Drill Rig	4-6t Excavator	Date Completed	23/11/22
Client	Douglas Shire Council	Inclination	-90°	Logged	DLH

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	*DEPTH* RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
ADT	L-M	▽	0.0	5.00				SC	TOPSOIL CLAYEY SAND: black, fine to coarse grained sand, low plasticity clay	D	L	
				0.10								
				4.90	BDS 0.10-0.60 m			GC	FILL CLAYEY SANDY GRAVEL: brown, fine to coarse gravel, fine to coarse grained sand, low plasticity clay, trace cobbles		MD	
			0.5									
			1.0									
				1.20						M		
				3.80	BDS 1.20-1.70 m			CH	SILTY CLAY: grey, high plasticity, trace fine grained sand		F to St	
			1.5									
		▽	2.0	*2.10*						W		
									BOREHOLE TERMINATED AT 2.10 m Target depth			
			2.5									
			3.0									
			3.5									

Comments

Checked SRF

Date 2/12/22

MFC_LIB_03.GLB Log MFC SOIL BOREHOLE 22092AA-D DSC - DAINTREE FERRY.GPJ <<DrawingFile>> 01/12/2022 14:27 8.30.003 Developed by Datgel

BOREHOLE: AH03

investigate | design | construct

Project	Geotechnical Investigation	East	328474.0 m		
Site	Daintree Ferry	North	8201452.0 m MGA2020 55	Sheet	1 OF 1
Location	Daintree	Surface RL	5.00 m AHD		
Position	Refer to Site Plan	Contractor	Geo Design	Date Started	23/11/22
Job No.	22092AA-D	Drill Rig	4-6t Excavator	Date Completed	23/11/22
Client	Douglas Shire Council	Inclination	-90°	Logged	DLH

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
			0.0	5.00				SC	TOPSOIL CLAYEY SAND: black, fine to coarse grained sand, low plasticity clay		L	
				0.10								
				4.90	BDS 0.10-0.50 m			GC	FILL CLAYEY SANDY GRAVEL: brown, fine to coarse gravel, fine to coarse grained sand, low plasticity clay, with cobbles	D		
			0.5	*0.50*								
				4.50	BDS 0.50-1.00 m			SP	SAND: brown, fine to coarse grained sand, non plastic		MD	
			1.0	*1.10*								
ADT	L-M			3.90				CH	SILTY CLAY: grey-brown, high plasticity, trace fine grained sand	M		
					DS 1.20-1.50 m						F to St	
		▽		*1.90*								
				3.10	DS 1.90-2.20 m			CL	SANDY SILTY CLAY: grey, low plasticity, fine grained sand	W	S	
			2.0	*2.20*								
									BOREHOLE TERMINATED AT 2.20 m Target depth			
			2.5									
			3.0									
			3.5									

Comments

Checked SRF

Date 2/12/22

MFC_LIB_03.GLB Log MFC SOIL BOREHOLE 22092AA-D DSC - DAINTREE FERRY.GPJ <<DrawingFile>> 01/12/2022 14:27 8.30.003 Developed by Datgel

BOREHOLE: AH04

investigate | design | construct

Project	Geotechnical Investigation	East	328592.0 m		
Site	Daintree Ferry	North	8201481.0 m MGA2020 55	Sheet	1 OF 1
Location	Daintree	Surface RL	6.00 m AHD		
Position	Refer to Site Plan	Contractor	Geo Design	Date Started	23/11/22
Job No.	22092AA-D	Drill Rig	4-6t Excavator	Date Completed	23/11/22
Client	Douglas Shire Council	Inclination	-90°	Logged	DLH

Drilling					Sampling		Field Material Description				
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
ADT	L-M	Not Observed	0.0	6.00				SC	TOPSOIL CLAYEY SAND: black, fine to coarse grained sand, low plasticity clay			
				0.10								
				5.90	BDS 0.10-0.40 m			SC	CLAYEY SAND: brown, fine to medium grained sand, low plasticity clay	D	L	
				0.40								
				5.60				SC	CLAYEY SAND: brown, fine to medium grained sand, low plasticity clay			
			0.5		BDS 0.50-1.00 m							
			1.0							M	MD	
			1.5	*1.50*								
				4.50	DS 1.50-1.70 m			SC	CLAYEY SAND: yellow-brown, fine to medium grained sand, low plasticity clay		L	
			2.0	*2.10*								
									BOREHOLE TERMINATED AT 2.10 m Target depth			
			2.5									
			3.0									
			3.5									

Comments

Checked SRF

Date 2/12/22

MFC_LIB_03.GLB Log MFC SOIL BOREHOLE 22092AA-D DSC - DAINTREE FERRY.GPJ <<DrawingFile>> 01/12/2022 14:28 8.30.003 Developed by Datgel

BOREHOLE: AH05

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Project	Geotechnical Investigation	East	328891.0 m		
Site	Daintree Ferry	North	8201804.0 m MGA2020 55	Sheet	1 OF 1
Location	Daintree	Surface RL	11.00 m AHD		
Position	Refer to Site Plan	Contractor	Geo Design	Date Started	23/11/22
Job No.	22092AA-D	Drill Rig	4-6t Excavator	Date Completed	23/11/22
Client	Douglas Shire Council	Inclination	-90°	Logged	DLH

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
			0.0	*0.05* 10.95					ASPHALT			
ADT		Not Observed			BDS 0.05-0.25 m			GM	FILL SILTY SANDY GRAVEL: grey, fine to coarse gravel, fine to coarse grained sand, low plasticity silt	D	MD	
				0.25 10.75	BDS 0.20-0.55 m			CL	FILL SANDY GRAVELLY CLAY: brown, red-brown, low plasticity, fine to coarse gravel, fine to coarse grained sand		VSt	
	L-M		0.5	*0.55* 10.45	BDS 0.55-0.80 m			SP	FILL SAND: brown, fine to coarse grained sand, with fine gravel		L	
				0.85 10.15	BDS 0.90-1.10 m			GC	FILL SANDY CLAYEY GRAVEL: brown, fine to coarse gravel, low plasticity clay, fine to coarse grained sand	M	MD to D	
	M-H		1.0	*1.15* 9.85	BDS 1.20-1.50 m			GP	FILL SANDY GRAVEL: grey, fine to coarse gravel, non plastic, fine to coarse grained sand, with cobbles		D to VD	
				1.50					BOREHOLE TERMINATED AT 1.50 m Refusal			
			1.5									
			2.0									
			2.5									
			3.0									
			3.5									

Comments

Checked SRF

Date 2/12/22

MFC_LIB_03.GLB Log MFC SOIL BOREHOLE 22092AA-D DSC - DAINTREE FERRY.GPJ <<DrawingFile>> 01/12/2022 14:28 8.30.003 Developed by Datgel

BOREHOLE: AH06

GEO
investigate | design | construct

Project	Geotechnical Investigation	East	329080.0 m		
Site	Daintree Ferry	North	8201917.0 m MGA2020 55	Sheet	1 OF 1
Location	Daintree	Surface RL	12.00 m AHD		
Position	Refer to Site Plan	Contractor	Geo Design	Date Started	23/11/22
Job No.	22092AA-D	Drill Rig	4-6t Excavator	Date Completed	23/11/22
Client	Douglas Shire Council	Inclination	-90°	Logged	DLH

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
			0.0	12.00				SC	TOPSOIL CLAYEY SAND: black, fine to coarse grained sand, low plasticity clay, with organics		L	
				0.10								
				11.90	BDS 0.10-0.60 m			GC	FILL CLAYEY SANDY GRAVEL: brown, fine to coarse gravel, fine to coarse grained sand, low plasticity clay, trace, organics			
			0.5							M	MD	
				0.90								
ADT	L-M			11.10	BDS 0.90-1.20 m			CH	SILTY CLAY: grey mottled orange-brown, high plasticity, with fine to coarse grained sand, trace fine to coarse gravel		F to St	
			1.0	*1.20*								
		▽		10.80	BDS 1.20-1.70 m			CH	SILTY CLAY: grey, high plasticity, trace fine grained sand, trace organics			
					PP 1.40 m =75 - 50 kPa							
			1.5							W	S	
			2.0	*2.20*								
									BOREHOLE TERMINATED AT 2.20 m Target depth			
			2.5									
			3.0									
			3.5									

Comments

Checked SRF
Date 2/12/22

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BOREHOLE: AH07

GEO
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Project	Geotechnical Investigation	East	328950.0 m		
Site	Daintree Ferry	North	8201840.0 m MGA2020 55	Sheet	1 OF 1
Location	Daintree	Surface RL	11.00 m AHD		
Position	Refer to Site Plan	Contractor	Geo Design	Date Started	23/11/22
Job No.	22092AA-D	Drill Rig	4-6t Excavator	Date Completed	23/11/22
Client	Douglas Shire Council	Inclination	-90°	Logged	DLH

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
			0.0	11.00				SC	TOPSOIL CLAYEY SAND: black, fine to coarse grained sand, low plasticity clay, trace fine gravel, with organics		L	
				0.20								
				10.80	BDS 0.20-0.70 m			GC	FILL CLAYEY SANDY GRAVEL: brown, fine to coarse gravel, fine to coarse grained sand, low plasticity clay, with cobbles, trace organics	M	MD	
			0.5									
				1.00								
			1.0	10.00	BDS 1.00-1.40 m			CH	SILTY CLAY: grey mottled orange-brown, high plasticity, with fine to coarse grained sand		F to St	
ADT	L-M	▽		*1.40*								
				9.60				CH	SILTY CLAY: grey, high plasticity, trace fine grained sand			
			1.5		BDS 1.50-2.00 m					W	S	
			2.0									
				2.40								
			2.5						BOREHOLE TERMINATED AT 2.40 m Target depth			
			3.0									
			3.5									

Comments

Checked SRF
Date 2/12/22

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BOREHOLE: AH08

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Project	Geotechnical Investigation	East	328763.0 m		
Site	Daintree Ferry	North	8201518.0 m MGA2020 55	Sheet	1 OF 1
Location	Daintree	Surface RL	10.00 m AHD		
Position	Refer to Site Plan	Contractor	Geo Design	Date Started	23/11/22
Job No.	22092AA-D	Drill Rig	4-6t Excavator	Date Completed	23/11/22
Client	Douglas Shire Council	Inclination	-90°	Logged	DLH

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
ADT	L-M	▽	0.0	10.00	BDS 0.10-0.60 m			SP	SAND: yellow-brown, fine to medium grained sand, non plastic	D	L	
			0.5									
			1.0							M	MD	
				1.30 8.70	BDS 1.30-1.80 m			SP	SAND: grey, fine to medium grained sand, non plastic			
			1.5							W	L	
			2.0	*2.20*					BOREHOLE TERMINATED AT 2.20 m Target depth			
			2.5									
			3.0									
			3.5									

Comments

Checked SRF

Date 2/12/22

MFC_LIB_03.GLB Log MFC SOIL BOREHOLE 22092AA-D DSC - DAINTREE FERRY.GPJ <<DrawingFile>> 01/12/2022 14:29 8.30.003 Developed by Datgel

BOREHOLE: AH09

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Project	Geotechnical Investigation	East	328757.0 m		
Site	Daintree Ferry	North	8201472.0 m MGA2020 55	Sheet	1 OF 1
Location	Daintree	Surface RL	11.00 m AHD		
Position	Refer to Site Plan	Contractor	Geo Design	Date Started	23/11/22
Job No.	22092AA-D	Drill Rig	4-6t Excavator	Date Completed	23/11/22
Client	Douglas Shire Council	Inclination	-90°	Logged	DLH

Drilling					Sampling		Field Material Description				
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
ADT	L-M	Not Encountered	0.0	11.00	BDS 0.10-0.40 m			GM	FILL SILTY SANDY GRAVEL: brown, fine to coarse gravel, fine to coarse grained sand, low plasticty silt	D	MD	
				0.40								
			0.5	10.60	BDS 0.50-1.00 m			SC	CLAYEY SAND: dark grey, fine to coarse grained sand, low plasticity clay	M	L to MD	
			1.0									
			1.5									
			2.0	*2.20*								
			2.5						BOREHOLE TERMINATED AT 2.20 m Target depth			
			3.0									
			3.5									

Comments

Checked SRF

Date 2/12/22

MFC_LIB_03.GLB Log MFC SOIL BOREHOLE 22092AA-D DSC - DAINTREE FERRY.GPJ <<DrawingFile>> 01/12/2022 14:29 8.30.003 Developed by Datgel

BOREHOLE: BH01

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Project	Geotechnical Investigation	East	328749.0 m		
Site	Daintree Ferry	North	8201531.0 m MGA2020 55	Sheet	1 OF 1
Location	Daintree	Surface RL	9.00 m AHD		
Position	Refer to Site Plan	Contractor	Geo Investigate	Date Started	24/11/22
Job No.	22092AA-D	Drill Rig	DT1200	Date Completed	24/11/22
Client	Douglas Shire Council	Inclination	-90°	Logged	DLH

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
ADT		▽	0	9.00	DS 0.10-0.40 m			CL	FILL SANDY CLAY: grey-brown, low plasticity, fine to coarse grained sand, trace fine gravel	M	S to F	
				0.40								
				8.60	DS 0.50-0.90 m			SP	SAND: brown, fine to coarse grained sand, non plastic			
				0.90								
				8.10	SPT 1.00-1.45 m 4, 2, 4 N*=6			SC	CLAYEY SAND: grey, fine to medium grained sand, low plasticity clay		L	
				1.80	DS 1.50-2.00 m							
			2	7.20	DS 2.00-2.50 m			CH	SILTY CLAY: dark grey, high plasticity, trace fine grained sand, trace organics, "MARINE CLAY"			1.70: Intermittent GRAVEL band
					U50 2.50-2.95 m						S	
					FV 2.95 m s_v=35 kPa							
				3.50								
				5.50				SP	SAND: grey, fine to coarse grained sand, non plastic, trace fine gravel			
			4		SPT 4.00-4.45 m 2, 5, 6 N*=11						MD	
			6		SPT 5.50-5.95 m 3, 4, 5 N*=9							
	L-M				SPT 7.00-7.45 m 1, 2, 2 N*=4					W	L	
			8	*8.50*								
WB				0.50	SPT 8.50-8.95 m 3, 7, 5 N*=12			SP	SAND: grey, fine to coarse grained sand, non plastic, trace fine to coarse gravel		MD	
				10.00								
			10	-1.00	SPT 10.00-10.45 m 2, 2, 3 N*=5			SP	SAND: grey, fine to coarse grained sand, non plastic, trace fine to medium gravel			
					SPT 11.50-11.95 m 2, 3, 3 N*=6						L	
			12	*13.00*								
				-4.00	SPT 13.00-13.45 m 2, 5, 6 N*=11			SP	SAND: grey, fine to coarse grained sand, non plastic, trace fine gravel			
			14								MD	
				14.95	SPT 14.50-14.95 m 3, 6, 9 N*=15				BOREHOLE TERMINATED AT 14.95 m Target depth			
			16									
			18									
			20									

Comments

Checked SRF

Date 2/12/22

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BOREHOLE: BH02

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Project	Geotechnical Investigation	East	328775.0 m		
Site	Daintree Ferry	North	8201533.0 m MGA2020 55	Sheet	1 OF 1
Location	Daintree	Surface RL	10.00 m AHD		
Position	Refer to Site Plan	Contractor	Geo Investigate	Date Started	24/11/22
Job No.	22092AA-D	Drill Rig	DT1200	Date Completed	25/11/22
Client	Douglas Shire Council	Inclination	-90°	Logged	DLH

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
ADT		▽	0	10.00	DS 0.10-0.50 m			SP	SAND: yellow-brown, fine to medium grained sand, non plastic	D	L	
					DS 0.50-1.00 m					M		
					SPT 1.00-1.45 m 2, 2, 1 N*=3							
				1.60								
				8.40				SP	SAND: grey, fine to medium grained sand, non plastic		MD	
			2	*2.30*								
				7.70				CH	SILTY CLAY: dark grey, high plasticity, trace fine grained sand, "MARINE CLAY"			
					U50 2.50-2.45 m						S	
					FV 2.95 m s_v=25 kPa							
			4	*4.20*	SPT 4.00-4.45 m 2, 1, 3 N*=4							
				5.80				SP	SAND: grey, fine to medium grained sand, non plastic			
					SPT 5.50-5.95 m 1, 0, 4 N*=4							
			6									
				7.00								
WB	L-M			3.00	SPT 7.00-7.45 m 3, 3, 3 N*=6			SP	SAND: grey, fine to coarse grained sand, non plastic, trace fine to medium gravel	W	L to MD	
			8									
					SPT 8.50-8.95 m 2, 3, 4 N*=7							
			10									
					SPT 10.00-10.45 m 1, 2, 2 N*=4							
					SPT 11.50-11.95 m 2, 4, 3 N*=7							
			12									
				13.00								
				-3.00	SPT 13.00-13.45 m HW/450mm PP 13.45 m =25 kPa			CH	SILTY CLAY: grey, high plasticity, trace fine grained sand, trace organics		S	
			14		FV 13.45 m s_v=36 kPa							
					U50 14.50-14.95 m							
				14.95								
					PP 14.95 m =35 kPa FV 14.95 m s_v=48 kPa				BOREHOLE TERMINATED AT 14.95 m Target depth			
			16									
			18									
			20									

Comments

Checked SRF

Date 2/12/22

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BOREHOLE: BH03

GEO
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Project	Geotechnical Investigation	East	328889.0 m		
Site	Daintree Ferry	North	8201801.0 m MGA2020 55	Sheet	1 OF 1
Location	Daintree	Surface RL	11.00 m AHD		
Position	Refer to Site Plan	Contractor	Geo Investigate	Date Started	25/11/22
Job No.	22092AA-D	Drill Rig	DT1200	Date Completed	25/11/22
Client	Douglas Shire Council	Inclination	-90°	Logged	DLH

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
ADT		▽	0	0.25				GM	ASPHALT	D	MD	
				0.55				CL	FILL SILTY SANDY GRAVEL: grey, fine to coarse gravel, fine to coarse grained sand, low plasticity silt		VSt	
				10.45				GC			MD to D	
				1.00					FILL GRAVELLY SANDY CLAY: brown, red-brown, low plasticity, fine to coarse grained sand, fine to coarse gravel			
				10.00				CH	FILL CLAYEY SANDY GRAVEL: brown, fine to coarse gravel, fine to coarse grained sand, low plasticity clay	M		
			2		SPT 1.50-1.95 m 1, 2, 2 N*=4	■			SILTY CLAY: grey mottled orange-brown, high plasticity, trace fine grained sand, trace organics, "MARINE CLAY"			
				2.80	SPT 2.50-2.95 m HW/450mm	■						
				8.20				CH	SILTY CLAY: dark grey, high plasticity, trace fine grained sand, trace organics, "MARINE CLAY"			
			4		SPT 4.00-4.45 m HW/450mm	■						
					U50 5.50-5.95 m	■						
			6		SPT 7.00-7.45 m HW/450mm	■						
	L-M											
			8	8.50							S	
WB				2.50	SPT 8.50-8.95 m HW/450mm	■		CH	SILTY CLAY: grey, high plasticity, trace fine grained sand, trace organics, "MARINE CLAY"	W		
			10		U50 10.00-10.45 m	■						
					SPT 11.50-11.95 m HW/450mm	■						
			12		U50 13.00-13.45 m	■						
			14									
				14.95	SPT 14.50-14.95 m HW/450mm	■						
									BOREHOLE TERMINATED AT 14.95 m Target depth			
			16									
			18									
			20									

Comments

Checked SRF
Date 2/12/22

MFC_LIB_03.GLB Log MFC SOIL BOREHOLE 22092AA-D DSC - DAINTREE FERRY.GPJ <<DrawingFile>> 01/12/2022 14:26 8.30.003 Developed by Datgel

CPT1

Company information

Name: GEO Investigate

Address: 14 Danbulan Street

Zip code: 4878

City: Smithfield

P.IVA:

E-Mail: office@geo-group.com.au

Phone number: 07 40382702

Fax number: 07 40383689

Site information

Name: 22092AA-D

Date: 5/12/2022

Commissioner: DSC

Locality: Daintree Ferry

Test information

Name: 1

Location: 1

Date: 5/12/2022

Prehole mode:

Prehole depth [cm]: 0

Hydrostatic line [cm]: 0

Ground level [cm]: 0

Latitude: 0

Longitude: 0

Operator:

Comments:

Probe code: KJ416

Depth [cm]	Qc [MPa]	Rf [%]	Fs [KPa]	U2 [KPa]
5	6.84	0.014912	1.02	-1.63
10	12.7	0.066142	8.4	-2.08
15	12.78	0.228638	29.22	-2.62
20	11.26	0.441385	49.7	-2.98
25	11.59	0.48145	55.8	-4.43
30	15.92	0.725565	115.51	-1.45
35	17.86	0.529283	94.53	-1.36
40	18.97	0.477333	90.55	-2.53
45	16.86	0.818149	137.94	-5.42
50	16.86	0.818149	137.94	-5.42
55	13.16	1.087006	143.05	-3.34
60	9.25	1.051568	97.27	-3.16
65	6.53	0.881776	57.58	-2.17
70	7.25	0.587448	42.59	-2.08
75	7.22	0.503601	36.36	-2.08
80	6.95	0.466331	32.41	-1.99
85	6.13	0.480914	29.48	-1.9
90	5.53	0.469982	25.99	-1.9
95	4.9	0.486735	23.85	-1.81
100	3.63	0.330303	11.99	-3.98
105	3.28	0.328354	10.77	-3.98
110	2.92	0.346233	10.11	-3.98
115	2.76	0.413043	11.4	-4.07
120	2.8	0.411786	11.53	-3.98
125	2.26	0.209735	4.74	-3.98
130	1.82	0.239011	4.35	-4.07
135	1.36	0.443382	6.03	-4.16
140	1.35	0.42	5.67	-4.16
145	1.46	0.230137	3.36	-4.25
150	1.48	0.215541	3.19	-4.34
155	1.32	0.164394	2.17	-4.34
160	0.92	0.175	1.61	-4.34
165	0.57	0.526316	3	-4.43
170	1.11	0.501802	5.57	-4.52
175	1.16	0.212931	2.47	-4.52
180	0.83	0.221687	1.84	-4.61
185	0.74	0.431081	3.19	-4.7
190	1.06	0.866981	9.19	-19.52
195	0.77	1.137662	8.76	-22.05
200	0.44	1.227273	5.4	-24.85

Depth [cm]	Qc [MPa]	Rf [%]	Fs [KPa]	U2 [KPa]
205	0.21	0.990476	2.08	-24.85
210	0.29	0.555172	1.61	-24.76
215	0.34	0.532353	1.81	-24.67
220	0.39	0.541026	2.11	-24.67
225	0.42	0.352381	1.48	-24.58
230	0.4	0.6825	2.73	-24.58
235	0.31	1.074194	3.33	-24.58
240	0.34	0.988235	3.36	-24.49
245	0.31	1.116129	3.46	-24.49
250	0.33	0.966667	3.19	-24.49
255	0.58	0.851724	4.94	-24.49
260	0.5	1.396	6.98	-24.58
265	0.56	1.658929	9.29	-24.67
270	0.31	1.541935	4.78	-24.49
275	0.27	2.733333	7.38	-23.5
280	0.35	1.957143	6.85	-23.41
285	0.32	2.7375	8.76	-23.32
290	0.28	2.871429	8.04	-23.14
295	0.29	2.227586	6.46	-23.14
300	0.28	1.589286	4.45	-22.96
305	0.29	1.262069	3.66	-22.86
310	0.37	1.362162	5.04	-22.77
315	0.28	2.107143	5.9	-22.68
320	0.32	2.19375	7.02	-22.68
325	0.36	2.608333	9.39	-22.59
330	0.35	3.134286	10.97	-22.5
335	0.3	3.886667	11.66	-22.5
340	0.28	3.421429	9.58	-22.41
345	0.25	2.464	6.16	-22.32
350	0.24	1.854167	4.45	-22.32
355	0.22	1.513636	3.33	-22.23
360	0.23	1.247826	2.87	-22.14
365	0.22	1.304545	2.87	-22.14
370	0.21	1.066667	2.24	-22.14
375	0.22	1.109091	2.44	-21.06
380	0.23	0.930435	2.14	-20.97
385	0.25	0.96	2.4	-20.88
390	0.29	0.910345	2.64	-20.79
395	0.34	0.844118	2.87	-20.7
400	0.32	1.25625	4.02	-20.61

Depth [cm]	Qc [MPa]	Rf [%]	Fs [KPa]	U2 [KPa]
405	0.3	1.296667	3.89	-20.52
410	0.26	1.430769	3.72	-20.42
415	0.26	1.153846	3	-20.33
420	0.25	1.132	2.83	-20.33
425	0.26	1.138462	2.96	-20.15
430	0.27	1.037037	2.8	-20.15
435	0.27	1.122222	3.03	-20.06
440	0.27	1.048148	2.83	-19.97
445	0.26	1.153846	3	-19.88
450	0.27	1.148148	3.1	-19.88
455	0.29	0.989655	2.87	-19.79
460	0.28	1.035714	2.9	-19.7
465	0.26	1.353846	3.52	-17.98
470	0.29	1.168966	3.39	-17.89
475	0.29	1.113793	3.23	-17.8
480	0.35	0.771429	2.7	-17.71
485	0.33	1.209091	3.99	-17.71
490	0.29	0.875862	2.54	-17.71
495	0.3	0.9	2.7	-17.53
500	0.32	0.90625	2.9	-17.53
505	0.32	0.978125	3.13	-17.35
510	0.3	1.426667	4.28	-17.26
515	0.28	1.589286	4.45	-17.08
520	0.3	1.053333	3.16	-17.08
525	0.29	0.965517	2.8	-16.9
530	0.31	0.819355	2.54	-16.81
535	0.38	0.755263	2.87	-16.72
540	1.36	0.288235	3.92	-16.27
545	2.51	0.203586	5.11	-16.27
550	2.65	0.162642	4.31	-16.09
555	2.7	0.136667	3.69	-16.09
560	2.57	0.266537	6.85	-16
565	2.62	0.179771	4.71	-16
570	2.47	0.177328	4.38	-15.91
575	3.06	0.143137	4.38	-15.82
580	3.89	0.112596	4.38	-15.54
585	3.87	0.105426	4.08	-14.46
590	3.9	0.217949	8.5	-14.37
595	3.95	0.135949	5.37	-14.37
600	4.04	0.143564	5.8	-14.19

Depth [cm]	Qc [MPa]	Rf [%]	Fs [KPa]	U2 [KPa]
605	4	0.093	3.72	-14.01
610	4.12	0.101456	4.18	-13.74
615	3.93	0.077099	3.03	-13.65
620	3.68	0.099457	3.66	-13.56
625	3.52	0.077557	2.73	-13.47
630	3.15	0.166349	5.24	-13.47
635	3.11	0.135691	4.22	-13.38
640	3.15	0.138095	4.35	-13.29
645	3.27	0.114679	3.75	-13.01
650	3.52	0.101989	3.59	-12.74
655	3.76	0.282181	10.61	-11.03
660	4.16	0.230288	9.58	-10.3
665	4.15	0.194458	8.07	-7.68
670	4.02	0.136816	5.5	-7.05
675	3.85	0.163377	6.29	-0.99
680	3.69	0.10542	3.89	21.96
685	3.68	0.084239	3.1	22.32
690	4.05	0.104198	4.22	22.96
695	4.09	0.098289	4.02	23.32
700	4	0.1045	4.18	23.68
705	4.21	0.112589	4.74	24.04
710	4.44	0.109009	4.84	24.85
715	4.26	0.119953	5.11	25.49
720	4.21	0.104038	4.38	25.85
725	4.24	0.094104	3.99	26.48
730	4.19	0.11074	4.64	26.84
735	4.14	0.113768	4.71	27.2
740	4.42	0.080543	3.56	27.65
745	4.55	0.154286	7.02	30.64
750	4.79	0.129228	6.19	31.99
755	4.93	0.108316	5.34	33.08
760	5.29	0.104537	5.53	34.07
765	5.45	0.132294	7.21	35.88
770	5.86	0.08157	4.78	36.24
775	5.59	0.086047	4.81	36.42
780	4.78	0.148745	7.11	50.43
785	4.75	0.129053	6.13	51.24
790	4.51	0.137251	6.19	51.24
795	4.42	0.137783	6.09	56.03
800	4.66	0.139914	6.52	56.48

Depth [cm]	Qc [MPa]	Rf [%]	Fs [KPa]	U2 [KPa]
805	4.92	0.118496	5.83	56.94
810	4.86	0.094239	4.58	57.3
815	4.78	0.088285	4.22	57.39
820	4.49	0.093987	4.22	57.66
825	4.18	0.202632	8.47	57.57
830	3.79	0.13219	5.01	57.93
835	3.61	0.114958	4.15	58.2
840	3.88	0.105155	4.08	59.29
845	3.77	0.155438	5.86	59.47
850	3.62	0.211878	7.67	59.74
855	3.87	0.207752	8.04	59.74
860	4.3	0.239767	10.31	62
865	3.87	0.263049	10.18	62.72
870	4.33	0.187991	8.14	63.26
875	4.56	0.273026	12.45	63.26
880	5.29	0.197353	10.44	65.25
885	5.3	0.220566	11.69	65.07
890	5.05	0.145545	7.35	65.7
895	4.74	0.207806	9.85	66.34
900	4.15	0.153976	6.39	66.61
905	3.99	0.170175	6.79	67.24
910	4.07	0.132678	5.4	67.78
915	4.08	0.122794	5.01	68.5
920	4.06	0.106158	4.31	68.96
925	3.99	0.093985	3.75	69.41
930	4.07	0.098034	3.99	69.59
935	4.21	0.108076	4.55	69.95
940	4.29	0.135198	5.8	70.22
945	4.44	0.109009	4.84	70.58
950	4.59	0.100436	4.61	70.94
955	4.87	0.134497	6.55	71.85
960	5.17	0.08472	4.38	72.12
965	5.51	0.121416	6.69	73.02
970	5.55	0.096216	5.34	73.2
975	5.36	0.159701	8.56	74.2
980	4.7	0.19617	9.22	74.38
985	4.12	0.180583	7.44	75.46
990	4.01	0.124938	5.01	75.55
995	3.92	0.1	3.92	75.92
1000	3.6	0.083333	3	76.1

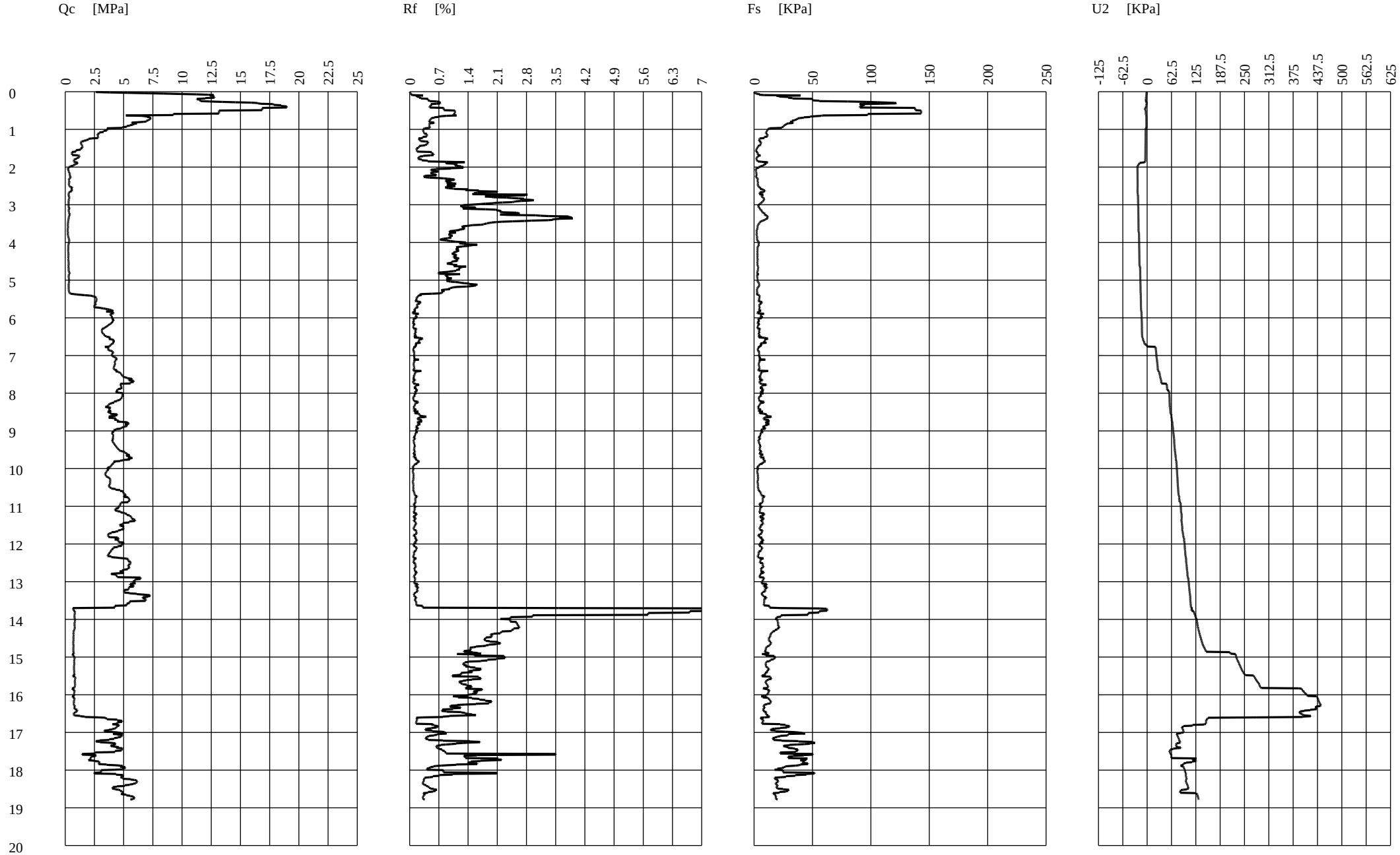
Depth [cm]	Qc [MPa]	Rf [%]	Fs [KPa]	U2 [KPa]
1005	3.58	0.07905	2.83	76.73
1010	3.53	0.072805	2.57	76.91
1015	3.41	0.090909	3.1	77.18
1020	3.5	0.089429	3.13	77.45
1025	3.75	0.0896	3.36	77.81
1030	3.86	0.087047	3.36	78.08
1035	3.84	0.071094	2.73	78.45
1040	3.85	0.084675	3.26	78.63
1045	3.78	0.088889	3.36	78.81
1050	3.79	0.081794	3.1	79.17
1055	4.31	0.090951	3.92	79.62
1060	4.69	0.079957	3.75	79.8
1065	4.97	0.10664	5.3	80.25
1070	5.18	0.11834	6.13	80.8
1075	5.02	0.180478	9.06	82.51
1080	5.44	0.136765	7.44	82.24
1085	5.52	0.134239	7.41	83.05
1090	5.4	0.139074	7.51	83.24
1095	4.68	0.1	4.68	86.04
1100	4.67	0.105139	4.91	86.31
1105	4.57	0.111816	5.11	86.67
1110	4.26	0.122066	5.2	86.94
1115	4.73	0.100211	4.74	87.21
1120	5.09	0.170138	8.66	88.57
1125	5.52	0.119928	6.62	88.57
1130	5.64	0.087057	4.91	88.66
1135	5.86	0.140444	8.23	87.93
1140	5.98	0.097993	5.86	88.03
1145	4.94	0.155263	7.67	89.2
1150	4.66	0.123605	5.76	89.56
1155	4.98	0.123695	6.16	90.01
1160	4.99	0.093788	4.68	90.47
1165	4.53	0.162914	7.38	90.83
1170	3.96	0.167172	6.62	91.73
1175	3.66	0.138525	5.07	92.36
1180	3.7	0.098919	3.66	92.54
1185	4.49	0.153229	6.88	94.62
1190	4.56	0.176974	8.07	95.16
1195	4.54	0.136344	6.19	94.89
1200	4.96	0.090927	4.51	96.16

Depth [cm]	Qc [MPa]	Rf [%]	Fs [KPa]	U2 [KPa]
1205	4.84	0.093182	4.51	96.34
1210	4.12	0.170388	7.02	96.88
1215	3.97	0.150882	5.99	97.24
1220	3.93	0.147583	5.8	97.51
1225	3.83	0.10235	3.92	97.88
1230	3.71	0.107547	3.99	97.97
1235	3.94	0.08198	3.23	99.14
1240	5.27	0.142505	7.51	100.05
1245	5.39	0.103896	5.6	100.14
1250	5.59	0.088372	4.94	100.32
1255	5.57	0.136086	7.58	100.86
1260	5.44	0.150184	8.17	101.58
1265	5.35	0.109533	5.86	102.12
1270	5.05	0.125149	6.32	102.3
1275	4.84	0.173554	8.4	103.39
1280	3.93	0.152417	5.99	103.57
1285	4.36	0.116284	5.07	103.48
1290	6.45	0.130698	8.43	105.47
1295	5.97	0.126968	7.58	106.1
1300	5.8	0.112414	6.52	106.55
1305	6.02	0.11113	6.69	106.91
1310	5.55	0.195856	10.87	107.37
1315	5.45	0.204954	11.17	107.91
1320	5.42	0.170849	9.26	108.27
1325	5.05	0.190495	9.62	108.81
1330	5.06	0.147826	7.48	109.17
1335	6.57	0.109741	7.21	109.9
1340	7.08	0.118644	8.4	110.53
1345	6.63	0.158974	10.54	110.89
1350	6.88	0.126453	8.7	110.89
1355	5.51	0.156624	8.63	111.34
1360	5.26	0.159696	8.4	111.88
1365	4.24	0.311557	13.21	112.52
1370	4.24	0.311557	13.21	112.52
1375	0.71	8.819718	62.62	113.96
1380	0.83	6.714458	55.73	119.75
1385	0.81	5.71358	46.28	121.92
1390	0.78	2.947436	22.99	123.81
1395	0.8	2.41625	19.33	125.35
1400	0.83	2.174699	18.05	126.53

Depth [cm]	Qc [MPa]	Rf [%]	Fs [KPa]	U2 [KPa]
1405	0.83	2.408434	19.99	127.61
1410	0.8	2.565	20.52	128.69
1415	0.79	2.593671	20.49	129.6
1420	0.82	2.626829	21.54	130.5
1425	0.8	2.49125	19.93	131.5
1430	0.73	2.441096	17.82	132.49
1435	0.72	2.205556	15.88	133.3
1440	0.7	2.008571	14.06	134.66
1445	0.71	1.971831	14	136.1
1450	0.7	1.825714	12.78	137.55
1455	0.71	1.78169	12.65	139
1460	0.7	1.92	13.44	140.26
1465	0.67	2.177612	14.59	141.8
1470	0.71	1.828169	12.98	143.88
1475	0.7	1.528571	10.7	146.05
1480	0.69	1.46087	10.08	148.85
1485	0.7	1.298571	9.09	151.38
1490	0.76	1.628947	12.38	213.38
1495	0.64	1.548438	9.91	227.65
1500	0.77	2.262338	17.42	228.2
1505	0.8	2.07875	16.63	230.55
1510	0.76	1.863158	14.16	231.72
1515	0.77	1.322078	10.18	235.25
1520	0.77	1.279221	9.85	236.24
1525	0.74	1.335135	9.88	239.22
1530	0.75	1.576	11.82	241.12
1535	0.75	1.694667	12.71	243.2
1540	0.77	1.501299	11.56	246.27
1545	0.76	1.226316	9.32	249.53
1550	0.65	1.018462	6.62	273.75
1555	0.85	1.650588	14.03	276.01
1560	0.83	1.496386	12.42	279.17
1565	0.82	1.273171	10.44	281.97
1570	0.83	1.226506	10.18	286.31
1575	0.84	1.364286	11.46	288.48
1580	0.8	1.4775	11.82	291.28
1585	0.62	1.375806	8.53	397.11
1590	0.81	1.638272	13.27	400
1595	0.77	1.612987	12.42	404.07
1600	0.75	1.493333	11.2	408.5

Depth [cm]	Qc [MPa]	Rf [%]	Fs [KPa]	U2 [KPa]
1605	0.59	1.038983	6.13	435.07
1610	0.8	1.49	11.92	437.96
1615	0.75	1.813333	13.6	439.86
1620	0.74	1.967568	14.56	441.3
1625	0.71	1.585915	11.26	444.37
1630	0.81	0.983951	7.97	444.92
1635	0.75	1.225333	9.19	433.08
1640	0.94	0.785106	7.38	429.01
1645	0.99	0.884848	8.76	393.49
1650	0.75	1.326667	9.95	392.05
1655	0.75	1.589333	11.92	400.99
1660	1.67	0.797006	13.31	399.91
1665	3.56	0.175	6.23	155.26
1670	4.87	0.160986	7.84	151.65
1675	4.45	0.152584	6.79	150.93
1680	4.3	0.52093	22.4	146.05
1685	4.47	0.680089	30.4	93.27
1690	4.29	0.519114	22.27	90.01
1695	3.74	0.375134	14.03	92.45
1700	4.08	0.83799	34.19	94.08
1705	4.09	0.715892	29.28	76.28
1710	4.82	0.465975	22.46	77.99
1715	4.5	0.397556	17.89	80.07
1720	3.77	0.443767	16.73	81.97
1725	2.62	1.451908	38.04	83.33
1730	4.29	1.112587	47.73	75.64
1735	4.06	0.745567	30.27	74.11
1740	4.59	0.633551	29.08	74.29
1745	4.92	0.708943	34.88	67.06
1750	4.26	0.838967	35.74	57.21
1755	2.56	0.872266	22.33	58.83
1760	1.44	3.5	50.4	61.64
1765	2.19	1.334247	29.22	62.18
1770	2.15	2.125116	45.69	126.98
1775	1.98	1.999495	39.59	121.46
1780	2.9	1.466207	42.52	115.05
1785	2.85	1.620351	46.18	93.63
1790	4.91	0.628513	30.86	86.94
1795	5.12	0.463867	23.75	94.71
1800	4.23	0.416548	17.62	96.43

Depth [cm]	Qc [MPa]	Rf [%]	Fs [KPa]	U2 [KPa]
1805	3.07	0.809121	24.84	97.33
1810	2.48	2.089113	51.81	99.59
1815	4.95	0.712727	35.28	99.14
1820	4.73	0.474841	22.46	100.5
1825	5.59	0.333453	18.64	101.22
1830	6.16	0.336364	20.72	99.32
1835	6.03	0.306965	18.51	101.4
1840	5.52	0.346014	19.1	103.21
1845	4.42	0.438235	19.37	104.84
1850	4.02	0.500746	20.13	106.46
1855	4.69	0.622175	29.18	86.76
1860	4.94	0.439474	21.71	84.86
1865	4.84	0.377686	18.28	128.78
1870	5.56	0.331835	18.45	129.69
1875	5.94	0.309428	18.38	131.41


Qc [MPa]
0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25
Rf [%]
0 0.7 1.4 2.1 2.8 3.5 4.2 4.9 5.6 6.3 7
Fs [KPa]
0 50 100 150 200 250
U2 [KPa]
-125 -62.5 0 62.5 125 187.5 250 312.5 375 437.5 500 562.5 625
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

CPT2

Company information

Name: GEO Investigate

Address: 14 Danbulan Street

Zip code: 4878

City: Smithfield

P.IVA:

E-Mail: office@geo-group.com.au

Phone number: 07 40382702

Fax number: 07 40383689

Site information

Name: 22092AA-D

Date: 5/12/2022

Commissioner: DSC

Locality: Daintree Ferry

Test information

Name: 2A

Location: 2A

Date: 5/12/2022

Prehole mode:

Prehole depth [cm]: 150

Hydrostatic line [cm]: 0

Ground level [cm]: 0

Latitude: 0

Longitude: 0

Operator:

Comments:

Probe code: KJ416

Depth [cm]	Qc [MPa]	Rf [%]	Fs [KPa]	U2 [KPa]
155	0.97	0.003093	0.03	0.18
160	1.84	0.005435	0.1	0.27
165	2.68	0.108209	2.9	-4.52
170	2.34	0.571368	13.37	-5.51
175	1.55	1.510968	23.42	-8.68
180	0.7	2.582857	18.08	-7.77
185	0.66	1.831818	12.09	-5.42
190	0	0	9.52	-4.34
195	0.72	1.381944	9.95	-3.25
200	0.69	1.288406	8.89	-2.26
205	0.77	0.932468	7.18	-1.17
210	1.15	0.850435	9.78	0.27
215	1.18	1.231356	14.53	-1.36
220	0.93	1.360215	12.65	-3.8
225	0.83	1.440964	11.96	-4.25
230	0.72	1.084722	7.81	-3.98
235	0.54	1.153704	6.23	-3.62
240	0.47	1.07234	5.04	-3.25
245	0.4	0.65	2.6	-2.62
250	0.44	0.411364	1.81	-2.08
255	0.42	0.659524	2.77	-1.72
260	0.49	0.62449	3.06	-1.17
265	0.54	1.366667	7.38	-1.27
270	0.56	1.935714	10.84	-1.63
275	0.43	2.925581	12.58	0.36
280	0.41	2.570732	10.54	1.63
285	0.38	2.626316	9.98	4.34
290	0.36	2.480556	8.93	5.06
295	0.34	1.955882	6.65	5.96
300	0.32	1.54375	4.94	6.87
305	0.32	1.4625	4.68	8.22
310	0.33	1.19697	3.95	9.04
315	0.35	1.525714	5.34	26.03
320	0.35	1.78	6.23	26.66
325	0.3	2.02	6.06	27.29
330	0.28	1.4	3.92	28.11
335	0.29	1.213793	3.52	28.74
340	0.23	1.330435	3.06	31.45
345	0.29	1.375862	3.99	31.9
350	0.29	1.227586	3.56	32.99

Depth [cm]	Qc [MPa]	Rf [%]	Fs [KPa]	U2 [KPa]
355	0.26	1.546154	4.02	34.16
360	0.26	1.215385	3.16	35.43
365	0.26	1.076923	2.8	36.42
370	0.27	1.355556	3.66	38.95
375	0.27	1.233333	3.33	39.77
380	0.26	1.342308	3.49	41.21
385	0.27	1.292593	3.49	42.11
390	0.27	1.159259	3.13	42.66
395	0.26	0.961538	2.5	43.56
400	0.27	0.940741	2.54	63.53
405	0.27	1.074074	2.9	65.79
410	0.31	1.06129	3.29	66.79
415	0.3	1.163333	3.49	68.05
420	0.28	1.107143	3.1	68.41
425	0.27	1.207407	3.26	69.32
430	0.25	1.224	3.06	70.13
435	0.27	1.074074	2.9	70.76
440	0.28	0.810714	2.27	71.49
445	0.28	1.046429	2.93	71.67
450	0.29	0.896552	2.6	72.57
455	0.3	0.746667	2.24	73.66
460	0.33	0.539394	1.78	74.74
465	0.29	0.717241	2.08	75.82
470	0.28	1	2.8	76.73
475	0.29	0.727586	2.11	78.36
480	0.3	1.063333	3.19	81.7
485	0.31	0.774194	2.4	82.78
490	0.31	0.63871	1.98	83.6
495	0.29	0.682759	1.98	84.32
500	0.28	0.692857	1.94	85.13
505	0.27	0.659259	1.78	101.49
510	0.28	0.471429	1.32	102.94
515	0.28	0.610714	1.71	103.48
520	0.27	0.451852	1.22	104.56
525	0.26	0.353846	0.92	105.56
530	0.23	0.373913	0.86	107.46
535	0.29	0.396552	1.15	109.17
540	0.32	0.340625	1.09	110.53
545	0.33	0.539394	1.78	108.27
550	0.34	0.705882	2.4	108.36

Depth [cm]	Qc [MPa]	Rf [%]	Fs [KPa]	U2 [KPa]
555	0.32	0.66875	2.14	110.53
560	0.35	0.602857	2.11	111.25
565	0.31	0.541935	1.68	112.97
570	0.32	0.575	1.84	114.6
575	0.33	0.569697	1.88	116.95
580	0.33	0.487879	1.61	118.39
585	0.38	0.536842	2.04	118.84
590	0.33	0.778788	2.57	116.58
595	0.34	0.764706	2.6	132.76
600	0.33	0.639394	2.11	134.48
605	0.34	0.697059	2.37	138
610	0.34	0.717647	2.44	136.2
615	0.36	0.841667	3.03	140.99
620	0.34	0.776471	2.64	135.56
625	0.37	0.702703	2.6	134.39
630	0.34	0.814706	2.77	128.42
635	0.3	1.096667	3.29	122.1
640	0.27	0.681481	1.84	124.81
645	0.3	0.57	1.71	126.53
650	0.29	0.589655	1.71	126.71
655	0.31	0.616129	1.91	127.79
660	0.35	0.648571	2.27	128.78
665	0.3	0.813333	2.44	122.64
670	0.33	0.827273	2.73	123.18
675	0.31	0.774194	2.4	123.18
680	0.32	0.8125	2.6	123.09
685	0.3	0.89	2.67	124.54
690	0.31	0.745161	2.31	125.17
695	0.32	0.925	2.96	143.7
700	0.31	0.819355	2.54	143.97
705	0.32	0.721875	2.31	146.23
710	0.35	0.582857	2.04	147.85
715	0.36	0.758333	2.73	147.67
720	0.38	0.771053	2.93	149.21
725	0.37	0.9	3.33	150.29
730	0.32	1.040625	3.33	149.03
735	0.33	0.878788	2.9	150.75
740	0.33	0.748485	2.47	150.56
745	0.32	0.66875	2.14	149.03
750	0.32	0.75	2.4	147.22

Depth [cm]	Qc [MPa]	Rf [%]	Fs [KPa]	U2 [KPa]
755	0.3	0.8	2.4	146.68
760	0.28	0.871429	2.44	144.96
765	0.28	0.625	1.75	145.77
770	0.3	0.57	1.71	146.77
775	0.35	0.46	1.61	146.95
780	0.37	0.551351	2.04	142.34
785	0.34	0.658824	2.24	141.44
790	0.3	0.8	2.4	143.61
795	0.33	0.630303	2.08	144.33
800	0.37	0.356757	1.32	146.23
805	0.35	0.48	1.68	141.71
810	0.31	0.435484	1.35	136.56
815	0.3	0.536667	1.61	133.12
820	0.32	0.371875	1.19	133.94
825	0.34	0.358824	1.22	129.24
830	0.33	0.339394	1.12	125.26
835	0.27	0.377778	1.02	119.66
840	0.28	0.282143	0.79	116.95
845	0.25	0.288	0.72	110.26
850	0.14	0.471429	0.66	77.99
855	0.05	1.26	0.63	62.18
860	0.06	1.05	0.63	65.43
865	0.05	1.18	0.59	66.7
870	0.08	0.7875	0.63	67.78
875	0.01	6.3	0.63	72.48
880	0	0	0.59	70.58
885	0	0	0.59	75.92
890	0	0	0.56	76.82
895	0	0	0.56	77.63
900	0	0	0.69	85.04
905	0	0	0.69	90.38
910	0.04	1.725	0.69	79.44
915	0.06	1.15	0.69	80.52
920	0.13	0.530769	0.69	80.43
925	0.15	0.506667	0.76	80.61
930	0.21	0.37619	0.79	81.88
935	0.23	0.330435	0.76	81.25
940	0.27	0.292593	0.79	79.62
945	0.37	0.232432	0.86	94.44
950	0.35	0.262857	0.92	96.61

Depth [cm]	Qc [MPa]	Rf [%]	Fs [KPa]	U2 [KPa]
955	0.29	0.272414	0.79	95.07
960	0.37	0.232432	0.86	100.32
965	0.4	0.2625	1.05	102.03
970	0.4	0.2625	1.05	104.84
975	0.43	0.360465	1.55	105.02
980	0.39	0.389744	1.52	107.55
985	0.36	0.411111	1.48	110.35
990	0.37	0.391892	1.45	112.79
995	0.34	0.494118	1.68	114.87
1000	0.34	0.435294	1.48	112.79
1005	0.41	0.731707	3	120.83
1010	0.33	0.909091	3	121.55
1015	0.36	0.75	2.7	123.63
1020	0.41	0.787805	3.23	125.08
1025	0.44	0.688636	3.03	126.62
1030	0.56	0.682143	3.82	127.07
1035	0.47	1.029787	4.84	126.53
1040	0.52	0.715385	3.72	127.43
1045	0.64	0.673438	4.31	129.87
1050	0.84	0.685714	5.76	126.89
1055	0.61	2.14918	13.11	-1431.9
1060	0.67	1.956716	13.11	116.22
1065	0.67	0	0	116.4
1070	0.47	1.604255	7.54	116.95
1075	0.47	1.268085	5.96	121.55
1080	0.59	0.825424	4.87	125.08
1085	0.61	0.981967	5.99	122.28
1090	0.56	1.235714	6.92	121.19
1095	0.7	1.91	13.37	124.27
1100	0.64	1.69375	10.84	111.43
1105	0.58	1.532759	8.89	108.45
1110	0.68	1.104412	7.51	109.81
1115	0.77	1.372727	10.57	107.91
1120	1.75	0.718857	12.58	109.53
1125	1.46	1.730137	25.26	105.11
1130	0.96	3.952083	37.94	95.16
1135	0.6	6.928333	41.57	99.95
1140	0.54	4.866667	26.28	107
1145	0.48	3.4375	16.5	111.07
1150	0.5	1.982	9.91	115.5

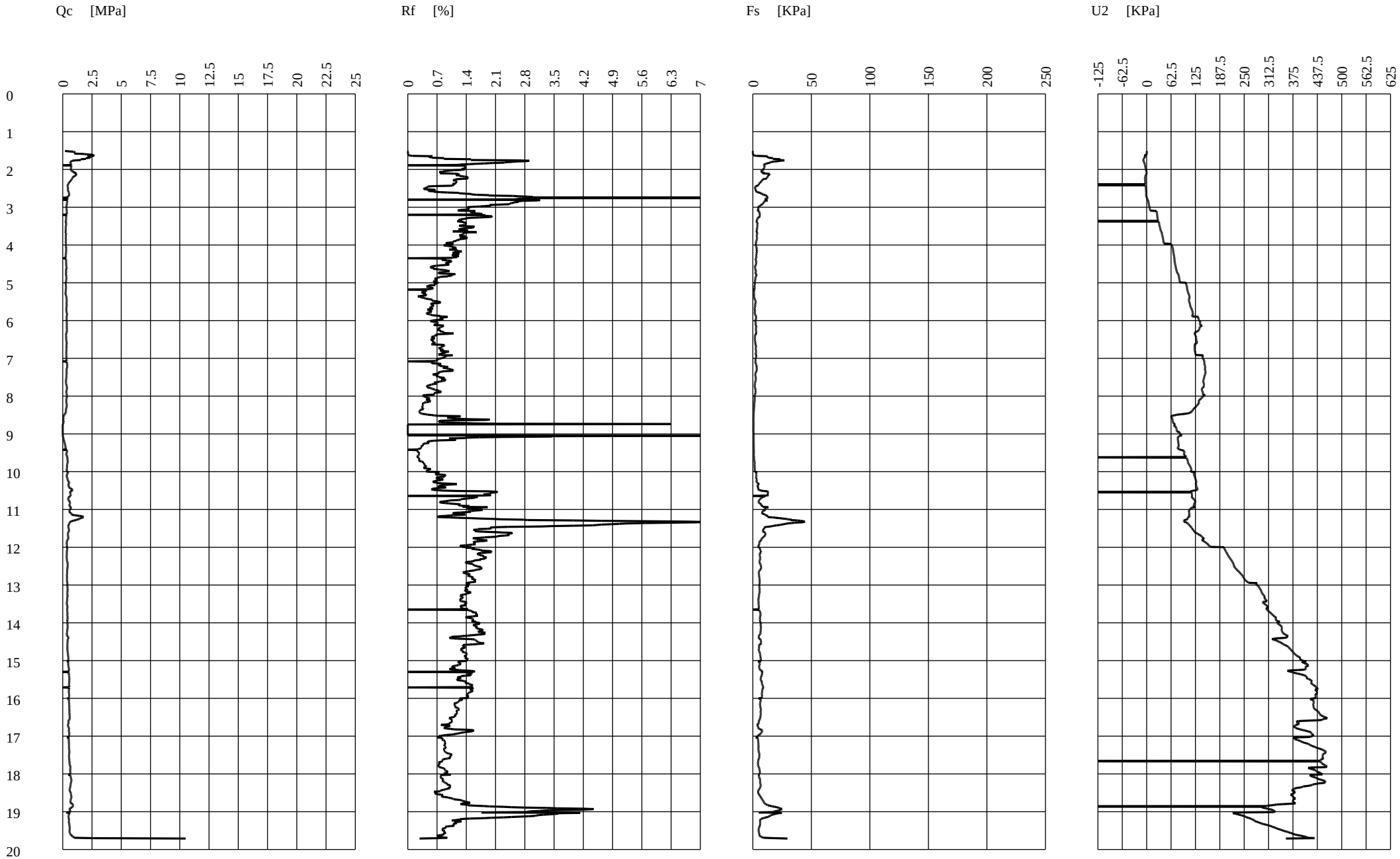
Depth [cm]	Qc [MPa]	Rf [%]	Fs [KPa]	U2 [KPa]
1155	0.54	1.568519	8.47	119.48
1160	0.49	1.822449	8.93	123.27
1165	0.44	2.379545	10.47	130.32
1170	0.45	2.326667	10.47	138.64
1175	0.47	1.83617	8.63	143.43
1180	0.43	1.653488	7.11	145.14
1185	0.35	1.74	6.09	146.32
1190	0.35	1.591429	5.57	153.55
1195	0.36	1.463889	5.27	158.43
1200	0.36	1.3	4.68	163.13
1205	0.39	1.528205	5.96	199.91
1210	0.36	1.755556	6.32	201.99
1215	0.35	1.9	6.65	204.7
1220	0.35	1.702857	5.96	207.41
1225	0.33	1.806061	5.96	210.03
1230	0.34	1.858824	6.32	213.47
1235	0.35	1.665714	5.83	217.08
1240	0.39	1.410256	5.5	219.79
1245	0.42	1.552381	6.52	222.59
1250	0.43	1.609302	6.92	223.68
1255	0.4	1.7625	7.05	227.02
1260	0.38	1.673684	6.36	230.82
1265	0.37	1.432432	5.3	235.97
1270	0.37	1.37027	5.07	240.04
1275	0.36	1.427778	5.14	244.74
1280	0.36	1.555556	5.6	247.72
1285	0.36	1.547222	5.57	250.7
1290	0.36	1.575	5.67	254.59
1295	0.4	1.44	5.76	260.46
1300	0.39	1.435897	5.6	281.7
1305	0.4	1.425	5.7	287.03
1310	0.41	1.373171	5.63	290.01
1315	0.42	1.357143	5.7	292.82
1320	0.39	1.502564	5.86	294.71
1325	0.38	1.405263	5.34	297.06
1330	0.42	1.254762	5.27	301.4
1335	0.38	1.292105	4.91	301.22
1340	0.38	1.257895	4.78	305.92
1345	0.36	1.344444	4.84	301.22
1350	0.35	1.374286	4.81	301.31

Depth [cm]	Qc [MPa]	Rf [%]	Fs [KPa]	U2 [KPa]
1355	0.38	1.360526	5.17	306.55
1360	0.4	1.26	5.04	309.44
1365	0.37	1.443243	5.34	307.64
1370	0.38	1.526316	5.8	311.52
1375	0.4	1.615	6.46	318.39
1380	0.39	1.664103	6.49	323.18
1385	0.41	1.460976	5.99	328.51
1390	0.39	1.546154	6.03	330.68
1395	0.4	1.5725	6.29	332.67
1400	0.4	1.615	6.46	334.93
1405	0.41	1.646341	6.75	338.82
1410	0.42	1.638095	6.88	345.5
1415	0.41	1.646341	6.75	346.41
1420	0.38	1.794737	6.82	346.5
1425	0.39	1.679487	6.55	348.03
1430	0.35	1.854286	6.49	352.28
1435	0.36	1.436111	5.17	359.96
1440	0.5	1.022	5.11	357.98
1445	0.42	1.6	6.72	324.54
1450	0.42	1.654762	6.95	335.47
1455	0.4	1.8275	7.31	347.04
1460	0.4	1.3175	5.27	354.45
1465	0.4	1.35	5.4	363.13
1470	0.39	1.292308	5.04	367.83
1475	0.4	1.3	5.2	372.25
1480	0.43	1.372093	5.9	376.95
1485	0.45	1.391111	6.26	381.74
1490	0.46	1.373913	6.32	387.62
1495	0.49	1.377551	6.75	392.32
1500	0.49	1.432653	7.02	399.19
1505	0.48	1.19375	5.73	398.64
1510	0.46	1.273913	5.86	410.3
1515	0.48	1.125	5.4	414.37
1520	0.5	1.114	5.57	407.41
1525	0.55	1.107273	6.09	404.52
1530	0.5	1.608	8.04	366.65
1535	0.52	1.425	7.41	385.54
1540	0.53	1.503774	7.97	404.07
1545	0.56	1.2	6.72	410.48
1550	0.57	1.173684	6.69	415.54

Depth [cm]	Qc [MPa]	Rf [%]	Fs [KPa]	U2 [KPa]
1555	0.55	1.341818	7.38	423.59
1560	0.55	1.383636	7.61	421.06
1565	0.54	1.537037	8.3	426.39
1570	0.56	1.523214	8.53	433.71
1575	0.54	1.518519	8.2	439.4
1580	0.52	1.538462	8	433.89
1585	0.53	1.479245	7.84	436.78
1590	0.54	1.414815	7.64	432.08
1595	0.56	1.435714	8.04	433.44
1600	0.53	1.44717	7.67	433.98
1605	0.53	1.298113	6.88	423.5
1610	0.53	1.211321	6.42	428.92
1615	0.55	1.101818	6.06	427.2
1620	0.55	1.125455	6.19	426.84
1625	0.55	1.143636	6.29	427.93
1630	0.57	1.224561	6.98	432.26
1635	0.56	1.169643	6.55	438.05
1640	0.57	1.178947	6.72	443.29
1645	0.58	1.141379	6.62	446.18
1650	0.6	1.12	6.72	455.04
1655	0.6	1.015	6.09	454.68
1660	0.49	1.069388	5.24	413.74
1665	0.51	1.019608	5.2	387.44
1670	0.44	0.927273	4.08	388.43
1675	0.46	0.967391	4.45	377.14
1680	0.54	0.885185	4.78	383.28
1685	0.51	1.562745	7.97	400.99
1690	0.55	1.370909	7.54	420.24
1695	0.57	1.149123	6.55	422.86
1700	0.54	0.792593	4.28	427.29
1705	0.51	0.762745	3.89	375.87
1710	0.52	0.811538	4.22	383.01
1715	0.53	0.888679	4.71	395.66
1720	0.52	0.892308	4.64	410.03
1725	0.54	0.872222	4.71	419.7
1730	0.54	0.896296	4.84	431.9
1735	0.54	0.853704	4.61	446.09
1740	0.57	0.866667	4.94	455.85
1745	0.57	0.924561	5.27	458.74
1750	0.54	1.061111	5.73	451.42

Depth [cm]	Qc [MPa]	Rf [%]	Fs [KPa]	U2 [KPa]
1755	0.53	1.007547	5.34	451.06
1760	0.56	0.946429	5.3	453.41
1765	0.56	0.823214	4.61	445.01
1770	0.58	0.743103	4.31	447.36
1775	0.58	0.767241	4.45	451.97
1780	0.64	0.725	4.64	460.19
1785	0.66	0.822727	5.43	413.74
1790	0.64	0.885938	5.67	430.37
1795	0.65	0.958462	6.23	436.33
1800	0.65	0.866154	5.63	446.9
1805	0.66	0.778788	5.14	418.98
1810	0.68	0.779412	5.3	432.26
1815	0.74	0.85	6.29	441.3
1820	0.73	0.839726	6.13	457.75
1825	0.7	0.902857	6.32	452.6
1830	0.67	0.968657	6.49	424.31
1835	0.65	1.003077	6.52	400.45
1840	0.6	0.955	5.73	378.58
1845	0.59	0.781356	4.61	372.71
1850	0.68	0.692647	4.71	379.12
1855	0.7	0.734286	5.14	371.62
1860	0.74	0.801351	5.93	374.79
1865	0.71	1.029577	7.31	379.21
1870	0.67	1.258209	8.43	375.6
1875	0.66	1.387879	9.16	374.6
1880	0.83	1.285542	10.67	366.38
1885	0.9	1.603333	14.43	309.35
1890	0.78	2.778205	21.67	296.16
1895	0.57	4.282456	24.41	318.21
1900	0.64	2.923438	18.71	328.51
1905	0.6	3.601667	21.61	221.15
1910	0.5	3.136	15.68	241.84
1915	0.51	2.480392	12.65	254.77
1920	0.53	1.335849	7.08	268.32
1925	0.54	1.116667	6.03	276.28
1930	0.54	1.127778	6.09	288.84
1935	0.56	1.1125	6.23	305.11
1940	0.58	0.943103	5.47	320.65
1945	0.6	0.861667	5.17	332.94
1950	0.58	0.846552	4.91	347.13

Depth [cm]	Qc [MPa]	Rf [%]	Fs [KPa]	U2 [KPa]
1955	0.59	0.854237	5.04	362.58
1960	0.63	0.852381	5.37	374.51
1965	0.82	0.69878	5.73	396.38
1970	0.98	0.944898	9.26	412.65


Qc [MPa]
0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25
Rf [%]
0 0.7 1.4 2.1 2.8 3.5 4.2 4.9 5.6 6.3 7
Fs [KPa]
0 50 100 150 200 250
U2 [KPa]
-125 -62.5 0 62.5 125 187.5 250 312.5 375 437.5 500 562.5 625
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

Appendix C

Results of Laboratory Testing

Consoil Solutions Pty. Ltd. T/A Earth Test
5 Costa Street, Tolga Industrial Estate
PO Box 1042, Tolga, QLD, 4882
Phone: 0740 954 734
Email: info@earthtest.com.au
NATA Accreditation No. 18563
ACN: 625 941 139 ABN: 17625941139
QBCC #: 15092731

Moisture Content Report

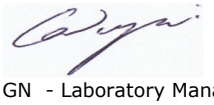
Client :	**GEO Design**	Report Number:	**SI 804-22 - 1/1**
Address :	**14 Danbulan Street, Smithfield, QLD, 4878**	Report Date :	**3/12/2022**
Project Name :	**22092AA-D**	Order Number :	
Project Number :	**SI 804-22**	Test Method :	**AS1289.2.1.1**
Location:	**Daintree Ferry , Daintree**	**Page 1 of 2**	

Sample Number :	T-16301	T-16302	T-16303	T-16304
Test Number :				
Sampling Method :	As Received	As Received	As Received	As Received
Date Sampled :	23/11/2022	23/11/2022	23/11/2022	23/11/2022
Date Tested :	29/11/2022	29/11/2022	29/11/2022	29/11/2022
Material Type :				
Material Source :	Insitu	Insitu	Insitu	Insitu
Lot Number :				
Sample Location :	AH01 Depth 0.2-0.7	AH02 Depth 1.2-1.7m	AH03 Depth 0.1-0.5m	AH04 Depth 0.1-0.4m
Oven Temperature (°C) :	105-110	105-110	105-110	105-110
Soil Description :				
Moisture Content (%) :	**8.6**	**32.4**	**6.6**	**11.5**
Remarks :	Test results only apply to the sample tested.			

NATA
WORLD RECOGNISED ACCREDITATION

Accredited for compliance with ISO/IEC 17025 - Testing

APPROVED SIGNATORY



GN - Laboratory Manager
NATA Accreditation Number
18563

Consoil Solutions Pty. Ltd. T/A Earth Test
5 Costa Street, Tolga Industrial Estate
PO Box 1042, Tolga, QLD, 4882
Phone: 0740 954 734
Email: info@earthtest.com.au
NATA Accreditation No. 18563
ACN: 625 941 139 ABN: 17625941139
QBCC #: 15092731

Moisture Content Report

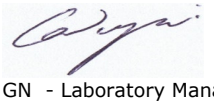
Client :	**GEO Design**	Report Number:	**SI 804-22 - 1/1**
Address :	**14 Danbulan Street, Smithfield, QLD, 4878**	Report Date :	**3/12/2022**
Project Name :	**22092AA-D**	Order Number :	
Project Number :	**SI 804-22**	Test Method :	**AS1289.2.1.1**
Location:	**Daintree Ferry , Daintree**	**Page 2 of 2**	

Sample Number :	T-16305	T-16306	T-16307	T-16308
Test Number :				
Sampling Method :	As Received	As Received	As Received	As Received
Date Sampled :	23/11/2022	23/11/2022	23/11/2022	23/11/2022
Date Tested :	29/11/2022	29/11/2022	29/11/2022	29/11/2022
Material Type :				
Material Source :	Insitu	Insitu	Insitu	Insitu
Lot Number :				
Sample Location :	AH05 Depth 0.25-0.55m	AH06 Depth 0.1-0.6m	AH07 Depth 1.0-1.4m	AH09 Depth 0.1-0.4m
Oven Temperature (°C) :	105-110	105-110	105-110	105-110
Soil Description :				
Moisture Content (%) :	**7.8**	**9.3**	**53**	**6.1**
Remarks :	Test results only apply to the sample tested.			

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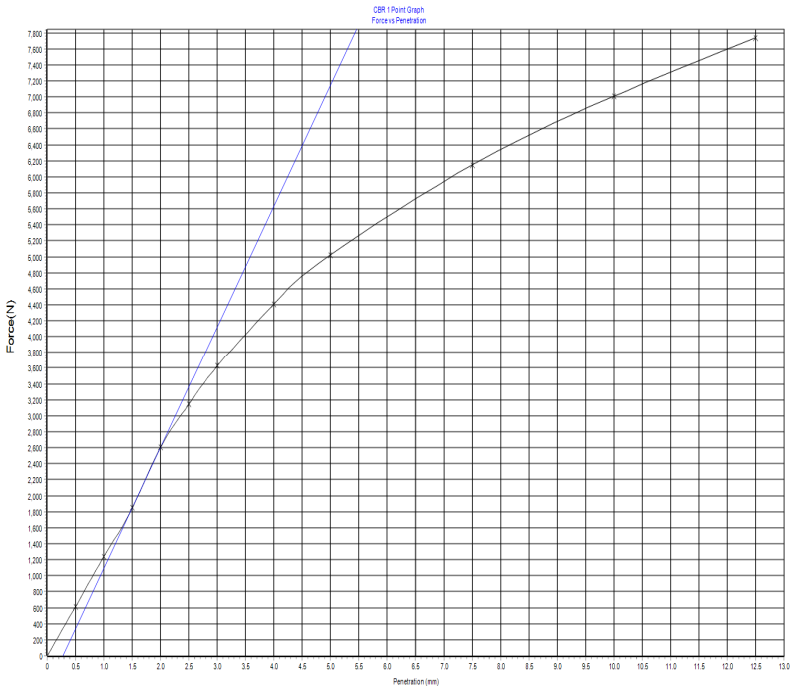
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NATA Accreditation No. 18563
ACN: 625 941 139 ABN: 17625941139
QBCC #: 15092731

California Bearing Ratio Report (1 Point)

Client :	**GEO Design**	Report Number:	**SI 804-22 - 2/1**
Address :	**14 Danbulan Street, Smithfield, QLD, 4878**	Report Date :	**9/12/2022**
Project Number :	**SI 804-22**	Order Number :	
Project Name :	**22092AA-D**	Test Method :	**AS1289.6.1.1**
Location:	**Daintree Ferry , Daintree**	**Page 1 of 8**	

Sample Number :	T-16301	SAMPLE LOCATION
Date Sampled :	23/11/2022	AH01
Date Tested :	5/12/2022	Depth 0.2-0.7
Sampled By :	Client	
Sampling Method :	As Received	
Material Source :	Insitu	Lot Number :
Material Type :		Test Number :
Remarks :	Test results only apply to the sample tested.	

Moisture Method :	AS1289.2.1.1
Maximum Dry Density (t/m³) :	1.96
Optimum Moisture Content (%) :	11.0
Compactive Effort :	Standard
Nominated Percentage of MDD :	100
Nominated Percentage of OMC :	100
Achieved Percentage of MDD :	98
Achieved Percentage of OMC :	100
Dry Density Before Soak (t/m³) :	1.92
Dry Density After Soak (t/m³) :	1.91
Moisture Content Before Soak (%) :	11.0
Moisture Content After Soak (%) :	15.0
Density Ratio After Soak (%) :	97
Field Moisture Content (%) :	7.8
Top Moisture Content - After Penetration (%) :	14.0
Total Moisture Content - After Penetration (%) :	
Soak Condition :	Soaked
Soak Period (days) :	4
Swell (%) :	0.5



CBR Surcharge (kg) :	4.5	CBR 2.5mm (%) :	25
Oversize (%) :	15	CBR 5.0mm (%) :	**25**
Oversize Material Replaced (%) :	Excluded	**CBR Value (%) :**	**25**

Site Selection :	Client Selected
Soil Description :	

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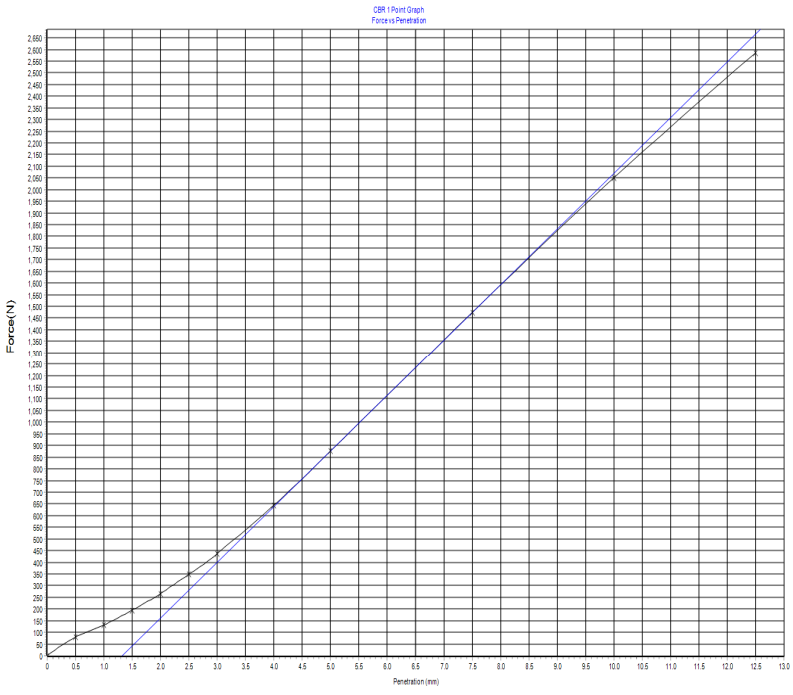
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NATA Accreditation No. 18563
ACN: 625 941 139 ABN: 17625941139
QBCC #: 15092731

California Bearing Ratio Report (1 Point)

Client :	**GEO Design**	Report Number:	**SI 804-22 - 2/1**
Address :	**14 Danbulan Street, Smithfield, QLD, 4878**	Report Date :	**9/12/2022**
Project Number :	**SI 804-22**	Order Number :	
Project Name :	**22092AA-D**	Test Method :	**AS1289.6.1.1**
Location:	**Daintree Ferry , Daintree**	**Page 2 of 8**	

Sample Number :	T-16302	SAMPLE LOCATION
Date Sampled :	23/11/2022	AH02
Date Tested :	6/12/2022	Depth 1.2-1.7m
Sampled By :	Client	
Sampling Method :	As Received	
Material Source :	Insitu	Lot Number :
Material Type :		Test Number :
Remarks :	Test results only apply to the sample tested.	

Moisture Method :	AS1289.2.1.1
Maximum Dry Density (t/m³) :	1.69
Optimum Moisture Content (%) :	18.4
Compactive Effort :	Standard
Nominated Percentage of MDD :	100
Nominated Percentage of OMC :	100
Achieved Percentage of MDD :	98
Achieved Percentage of OMC :	101
Dry Density Before Soak (t/m³) :	1.66
Dry Density After Soak (t/m³) :	1.66
Moisture Content Before Soak (%) :	18.5
Moisture Content After Soak (%) :	20.9
Density Ratio After Soak (%) :	98
Field Moisture Content (%) :	16.5
Top Moisture Content - After Penetration (%) :	20.4
Total Moisture Content - After Penetration (%) :	
Soak Condition :	Soaked
Soak Period (days) :	4
Swell (%) :	0.0



CBR Surcharge (kg) :	4.5	CBR 2.5mm (%) :	4.5
Oversize (%) :	0	CBR 5.0mm (%) :	**6**
Oversize Material Replaced (%) :	Excluded	**CBR Value (%) :**	**6**

Site Selection :	Client Selected
Soil Description :	

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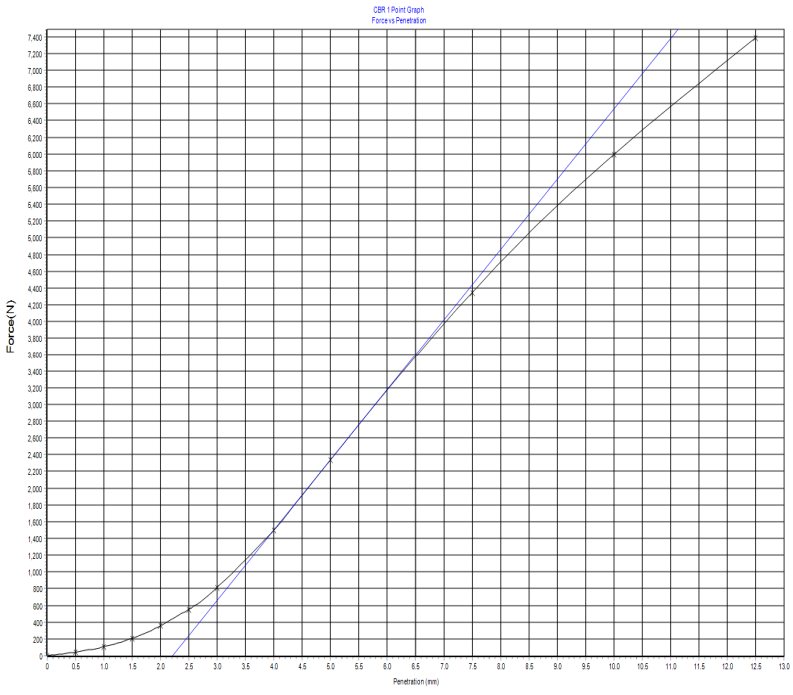
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California Bearing Ratio Report (1 Point)

Client :	**GEO Design**	Report Number:	**SI 804-22 - 2/1**
Address :	**14 Danbulan Street, Smithfield, QLD, 4878**	Report Date :	**9/12/2022**
Project Number :	**SI 804-22**	Order Number :	
Project Name :	**22092AA-D**	Test Method :	**AS1289.6.1.1**
Location:	**Daintree Ferry , Daintree**	**Page 3 of 8**	

Sample Number :	T-16303	SAMPLE LOCATION
Date Sampled :	23/11/2022	AH03
Date Tested :	5/12/2022	Depth 0.1-0.5m
Sampled By :	Client	
Sampling Method :	As Received	
Material Source :	Insitu	Lot Number :
Material Type :		Test Number :
Remarks :	Test results only apply to the sample tested.	

Moisture Method :	AS1289.2.1.1
Maximum Dry Density (t/m³) :	1.89
Optimum Moisture Content (%) :	13.5
Compactive Effort :	Standard
Nominated Percentage of MDD :	100
Nominated Percentage of OMC :	100
Achieved Percentage of MDD :	98
Achieved Percentage of OMC :	99
Dry Density Before Soak (t/m³) :	1.86
Dry Density After Soak (t/m³) :	1.86
Moisture Content Before Soak (%) :	13.4
Moisture Content After Soak (%) :	15.0
Density Ratio After Soak (%) :	98
Field Moisture Content (%) :	7.2
Top Moisture Content - After Penetration (%) :	14.5
Total Moisture Content - After Penetration (%) :	
Soak Condition :	Soaked
Soak Period (days) :	4
Swell (%) :	0.0



CBR Surcharge (kg) :	4.5	CBR 2.5mm (%) :	16
Oversize (%) :	23	CBR 5.0mm (%) :	**20**
Oversize Material Replaced (%) :	Excluded	**CBR Value (%) :**	**20**

Site Selection :	Client Selected
Soil Description :	

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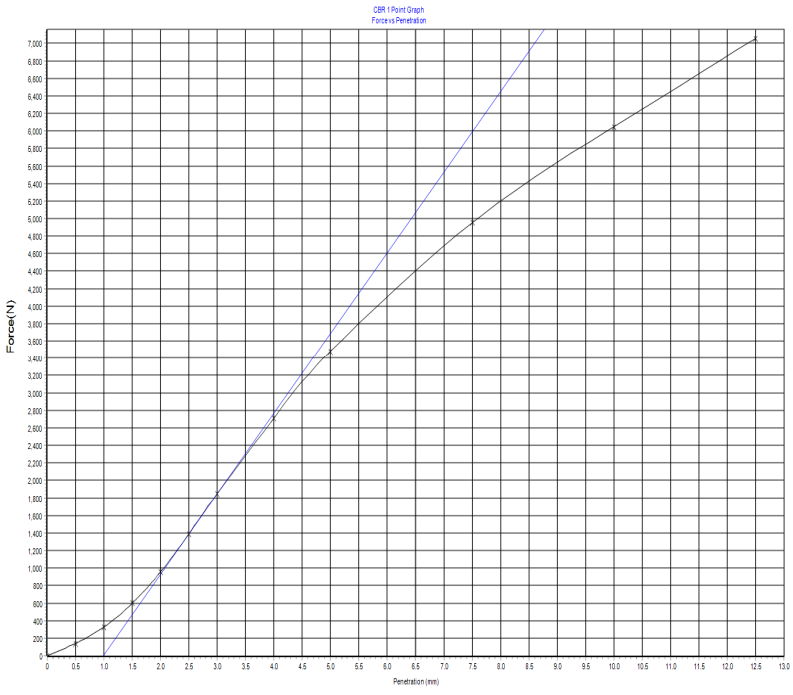
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California Bearing Ratio Report (1 Point)

Client :	**GEO Design**	Report Number:	**SI 804-22 - 2/1**
Address :	**14 Danbulan Street, Smithfield, QLD, 4878**	Report Date :	**9/12/2022**
Project Number :	**SI 804-22**	Order Number :	
Project Name :	**22092AA-D**	Test Method :	**AS1289.6.1.1**
Location:	**Daintree Ferry , Daintree**	**Page 4 of 8**	

		SAMPLE LOCATION
Sample Number :	T-16304	
Date Sampled :	23/11/2022	AH04
Date Tested :	5/12/2022	Depth 0.1-0.4m
Sampled By :	Client	
Sampling Method :	As Received	
Material Source :	Insitu	Lot Number :
Material Type :		Test Number :
Remarks :	Test results only apply to the sample tested.	

Moisture Method :	AS1289.2.1.1
Maximum Dry Density (t/m³) :	1.85
Optimum Moisture Content (%) :	12.8
Compactive Effort :	Standard
Nominated Percentage of MDD :	100
Nominated Percentage of OMC :	100
Achieved Percentage of MDD :	98
Achieved Percentage of OMC :	100
Dry Density Before Soak (t/m³) :	1.82
Dry Density After Soak (t/m³) :	1.82
Moisture Content Before Soak (%) :	12.8
Moisture Content After Soak (%) :	15.9
Density Ratio After Soak (%) :	98
Field Moisture Content (%) :	10.6
Top Moisture Content - After Penetration (%) :	14.0
Total Moisture Content - After Penetration (%) :	
Soak Condition :	Soaked
Soak Period (days) :	4
Swell (%) :	0.0



CBR Surcharge (kg) :	4.5	CBR 2.5mm (%) :	17
Oversize (%) :	3	CBR 5.0mm (%) :	**20**
Oversize Material Replaced (%) :	Excluded	**CBR Value (%) :**	**20**

Site Selection :	Client Selected
Soil Description :	

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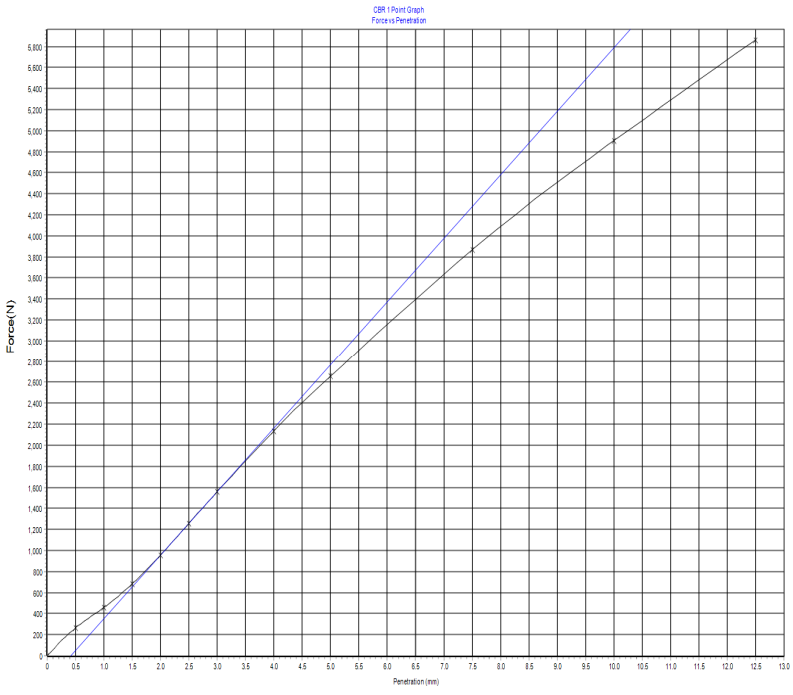
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California Bearing Ratio Report (1 Point)

Client :	**GEO Design**	Report Number:	**SI 804-22 - 2/1**
Address :	**14 Danbulan Street, Smithfield, QLD, 4878**	Report Date :	**9/12/2022**
Project Number :	**SI 804-22**	Order Number :	
Project Name :	**22092AA-D**	Test Method :	**AS1289.6.1.1**
Location:	**Daintree Ferry , Daintree**	**Page 5 of 8**	

Sample Number :	T-16305	SAMPLE LOCATION
Date Sampled :	23/11/2022	AH05
Date Tested :	6/12/2022	Depth 0.25-0.55m
Sampled By :	Client	
Sampling Method :	As Received	
Material Source :	Insitu	Lot Number :
Material Type :		Test Number :
Remarks :	Test results only apply to the sample tested.	

Moisture Method :	AS1289.2.1.1
Maximum Dry Density (t/m³) :	2.03
Optimum Moisture Content (%) :	10.6
Compactive Effort :	Standard
Nominated Percentage of MDD :	100
Nominated Percentage of OMC :	100
Achieved Percentage of MDD :	99
Achieved Percentage of OMC :	99
Dry Density Before Soak (t/m³) :	2.00
Dry Density After Soak (t/m³) :	2.00
Moisture Content Before Soak (%) :	10.5
Moisture Content After Soak (%) :	13.0
Density Ratio After Soak (%) :	99
Field Moisture Content (%) :	8.2
Top Moisture Content - After Penetration (%) :	11.4
Total Moisture Content - After Penetration (%) :	
Soak Condition :	Soaked
Soak Period (days) :	4
Swell (%) :	0.0



CBR Surcharge (kg) :	4.5	CBR 2.5mm (%) :	11
Oversize (%) :	9	CBR 5.0mm (%) :	**14**
Oversize Material Replaced (%) :	Excluded	**CBR Value (%) :**	**14**

Site Selection :	Client Selected
Soil Description :	

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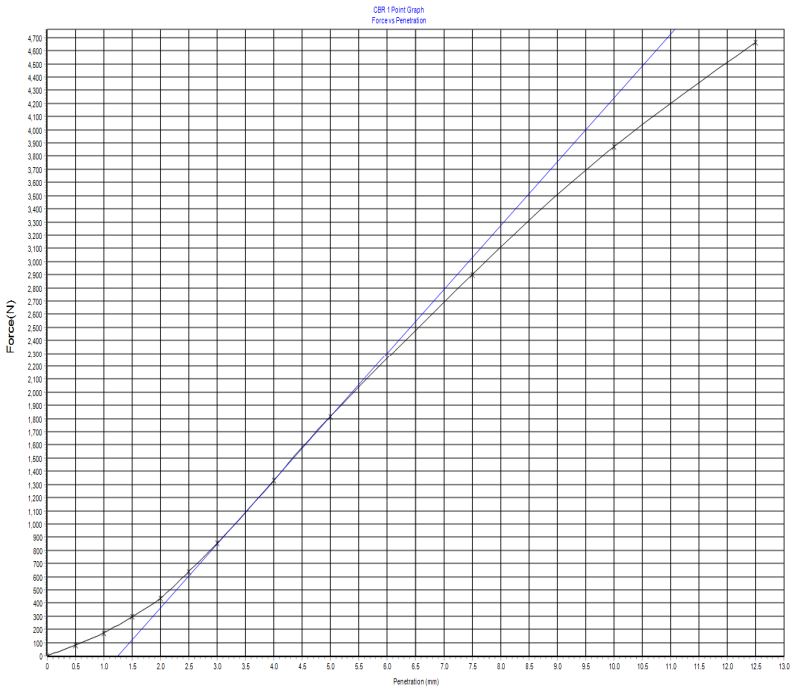
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California Bearing Ratio Report (1 Point)

Client :	**GEO Design**	Report Number:	**SI 804-22 - 2/1**
Address :	**14 Danbulan Street, Smithfield, QLD, 4878**	Report Date :	**9/12/2022**
Project Number :	**SI 804-22**	Order Number :	
Project Name :	**22092AA-D**	Test Method :	**AS1289.6.1.1**
Location:	**Daintree Ferry , Daintree**	**Page 6 of 8**	

Sample Number :	T-16306	SAMPLE LOCATION
Date Sampled :	23/11/2022	AH06
Date Tested :	6/12/2022	Depth 0.1-0.6m
Sampled By :	Client	
Sampling Method :	As Received	
Material Source :	Insitu	Lot Number :
Material Type :		Test Number :
Remarks :	Test results only apply to the sample tested.	

Moisture Method :	AS1289.2.1.1
Maximum Dry Density (t/m³) :	1.87
Optimum Moisture Content (%) :	13.5
Compactive Effort :	Standard
Nominated Percentage of MDD :	100
Nominated Percentage of OMC :	100
Achieved Percentage of MDD :	98
Achieved Percentage of OMC :	100
Dry Density Before Soak (t/m³) :	1.84
Dry Density After Soak (t/m³) :	1.84
Moisture Content Before Soak (%) :	13.5
Moisture Content After Soak (%) :	16.3
Density Ratio After Soak (%) :	98
Field Moisture Content (%) :	10.3
Top Moisture Content - After Penetration (%) :	14.7
Total Moisture Content - After Penetration (%) :	
Soak Condition :	Soaked
Soak Period (days) :	4
Swell (%) :	0.0



CBR Surcharge (kg) :	4.5	CBR 2.5mm (%) :	9
Oversize (%) :	29	CBR 5.0mm (%) :	**12**
Oversize Material Replaced (%) :	Excluded	**CBR Value (%) :**	**12**

Site Selection :	Client Selected
Soil Description :	

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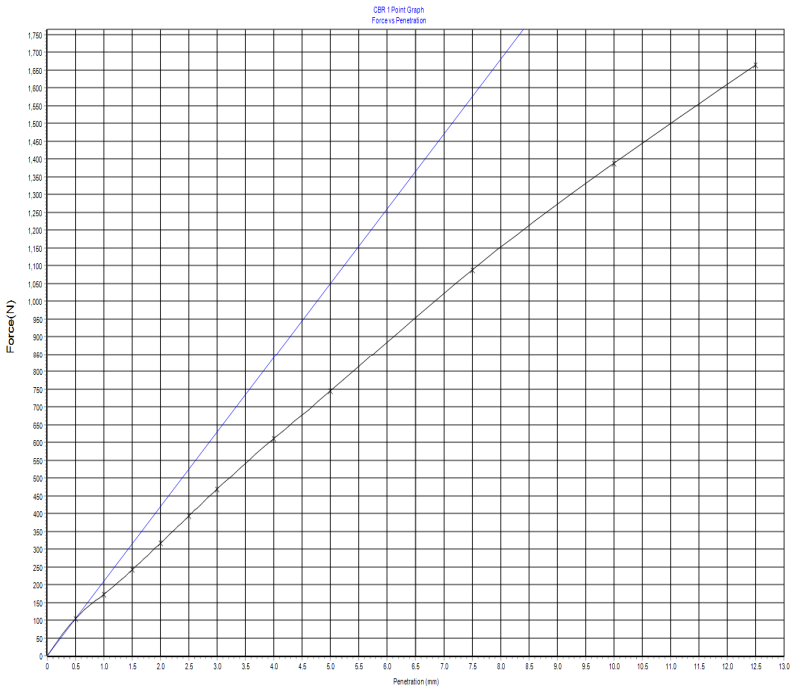
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California Bearing Ratio Report (1 Point)

Client :	**GEO Design**	Report Number:	**SI 804-22 - 2/1**
Address :	**14 Danbulan Street, Smithfield, QLD, 4878**	Report Date :	**9/12/2022**
Project Number :	**SI 804-22**	Order Number :	
Project Name :	**22092AA-D**	Test Method :	**AS1289.6.1.1**
Location:	**Daintree Ferry , Daintree**	**Page 7 of 8**	

		SAMPLE LOCATION
Sample Number :	T-16307	
Date Sampled :	23/11/2022	AH07
Date Tested :	6/12/2022	Depth 1.0-1.4m
Sampled By :	Client	
Sampling Method :	As Received	
Material Source :	Insitu	Lot Number :
Material Type :		Test Number :
Remarks :	Test results only apply to the sample tested.	

Moisture Method :	AS1289.2.1.1
Maximum Dry Density (t/m³) :	1.49
Optimum Moisture Content (%) :	25.9
Compactive Effort :	Standard
Nominated Percentage of MDD :	100
Nominated Percentage of OMC :	100
Achieved Percentage of MDD :	98
Achieved Percentage of OMC :	99
Dry Density Before Soak (t/m³) :	1.46
Dry Density After Soak (t/m³) :	1.46
Moisture Content Before Soak (%) :	25.6
Moisture Content After Soak (%) :	28.8
Density Ratio After Soak (%) :	98
Field Moisture Content (%) :	25.2
Top Moisture Content - After Penetration (%) :	27.6
Total Moisture Content - After Penetration (%) :	
Soak Condition :	Soaked
Soak Period (days) :	4
Swell (%) :	0.5



CBR Surcharge (kg) :	4.5	CBR 2.5mm (%) :	3
Oversize (%) :	11	CBR 5.0mm (%) :	**4**
Oversize Material Replaced (%) :	Excluded	**CBR Value (%) :**	**4.0**

Site Selection :	Client Selected
Soil Description :	

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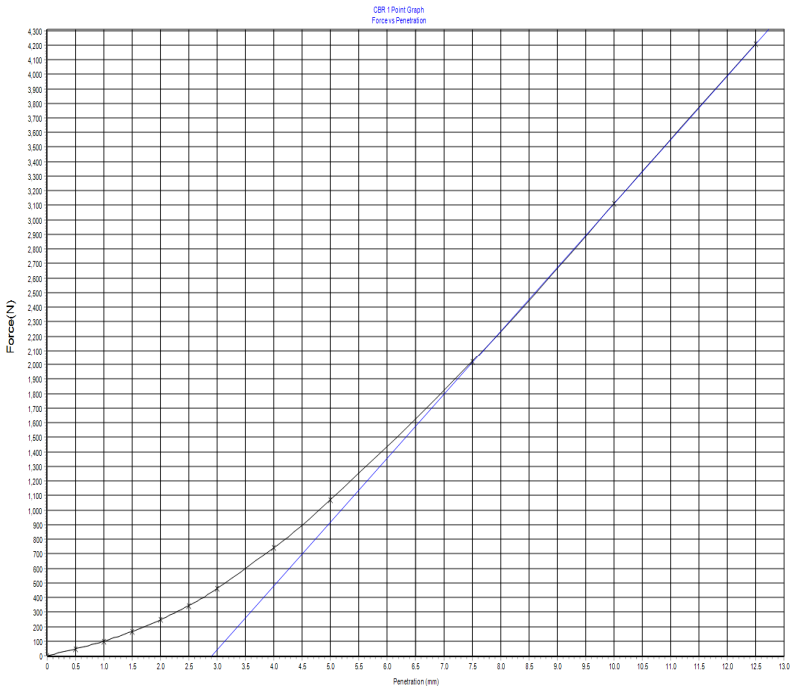
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California Bearing Ratio Report (1 Point)

Client :	**GEO Design**	Report Number:	**SI 804-22 - 2/1**
Address :	**14 Danbulan Street, Smithfield, QLD, 4878**	Report Date :	**9/12/2022**
Project Number :	**SI 804-22**	Order Number :	
Project Name :	**22092AA-D**	Test Method :	**AS1289.6.1.1**
Location:	**Daintree Ferry , Daintree**	**Page 8 of 8**	

Sample Number :	T-16308	SAMPLE LOCATION
Date Sampled :	23/11/2022	AH09
Date Tested :	5/12/2022	Depth 0.1-0.4m
Sampled By :	Client	
Sampling Method :	As Received	
Material Source :	Insitu	Lot Number :
Material Type :		Test Number :
Remarks :	Test results only apply to the sample tested.	

Moisture Method :	AS1289.2.1.1
Maximum Dry Density (t/m³) :	2.01
Optimum Moisture Content (%) :	10.1
Compactive Effort :	Standard
Nominated Percentage of MDD :	100
Nominated Percentage of OMC :	100
Achieved Percentage of MDD :	98
Achieved Percentage of OMC :	101
Dry Density Before Soak (t/m³) :	1.97
Dry Density After Soak (t/m³) :	1.97
Moisture Content Before Soak (%) :	10.2
Moisture Content After Soak (%) :	11.0
Density Ratio After Soak (%) :	98
Field Moisture Content (%) :	5.7
Top Moisture Content - After Penetration (%) :	11.0
Total Moisture Content - After Penetration (%) :	
Soak Condition :	Soaked
Soak Period (days) :	4
Swell (%) :	0.0



CBR Surcharge (kg) :	4.5	CBR 2.5mm (%) :	9
Oversize (%) :	2	CBR 5.0mm (%) :	**11**
Oversize Material Replaced (%) :	Included	**CBR Value (%) :**	**11**

Site Selection :	Client Selected
Soil Description :	

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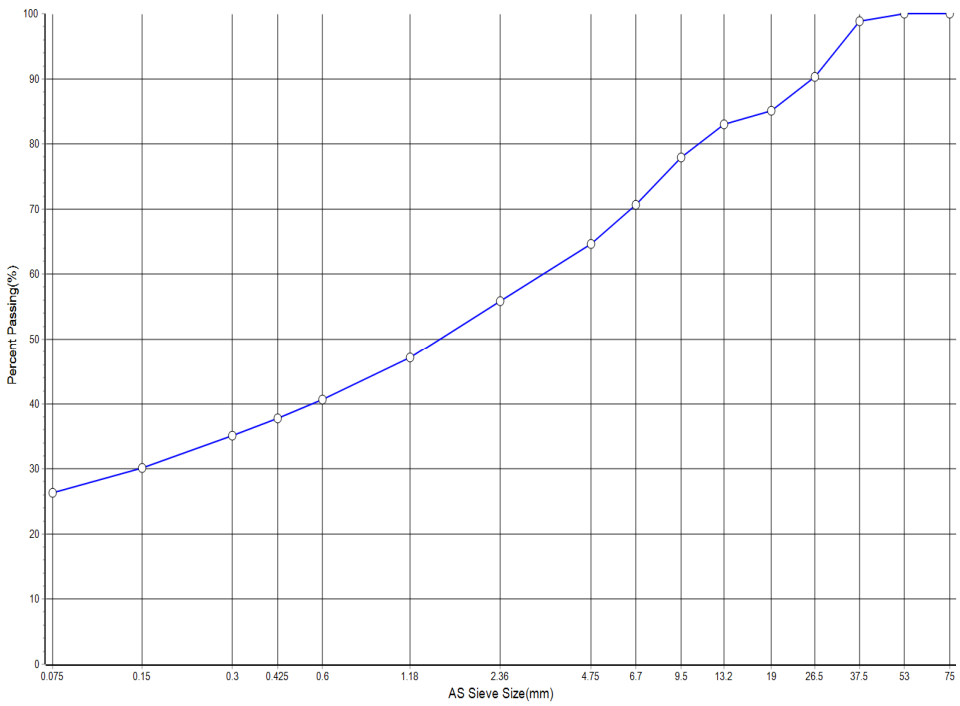
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QBCC #: 15092731

Quality of Materials Report

Client :	**GEO Design**	Report Number:	**SI 804-22 - 3/1**
Address :	**14 Danbulan Street, Smithfield, QLD, 4878**	Report Date :	**9/12/2022**
Project Name :	**22092AA-D**	Order Number :	
Project Number :	**SI 804-22**	Test Method :	**AS1289.3.6.1**
Location:	**Daintree Ferry , Daintree**	**Page 1 of 8**	

Sample Number :	T-16301	SAMPLE LOCATION	
Sampling Method :	As Received	**AH01**	
Sampled By :	Client	**Depth 0.2-0.7**	
Date Sampled :	23/11/2022		
Date Tested :	30/11/2022		
Material Type :		Test Number :	
Material Source :	Insitu	Lot Number :	
Remarks :	Test results only apply to the sample tested.	Specification Number :	

AS Sieve Size(mm)	Percent Passing	Specification Limits
100		
75.0	**100**	
63.0		
53.0	**100**	
37.5	**99**	
26.5	**90**	
19.0	**85**	
16.0		
13.2	**83**	
9.5	**78**	
6.7	**71**	
4.75	**65**	
2.36	**56**	
1.18	**47**	
0.600	**41**	
0.425	**38**	
0.300	**35**	
0.150	**30**	
0.075	**26**	



		Test Method	Results		
Liquid Limit (%) :		**AS1289.3.1.2, 3.2.1, 3.3.1, 3.4.1**	**34**	Shrinkage Comments :	**No Cracking or Crumbling**
Plastic Limit (%) :			**26**	Mould Length (mm) :	**250.2**
Plasticity Index (%) :			**8**	Sample History	**Oven Dried**
Linear Shrinkage (%) :			**3**	Q252 Weighted PI (%):	**304**
Soil Description :					

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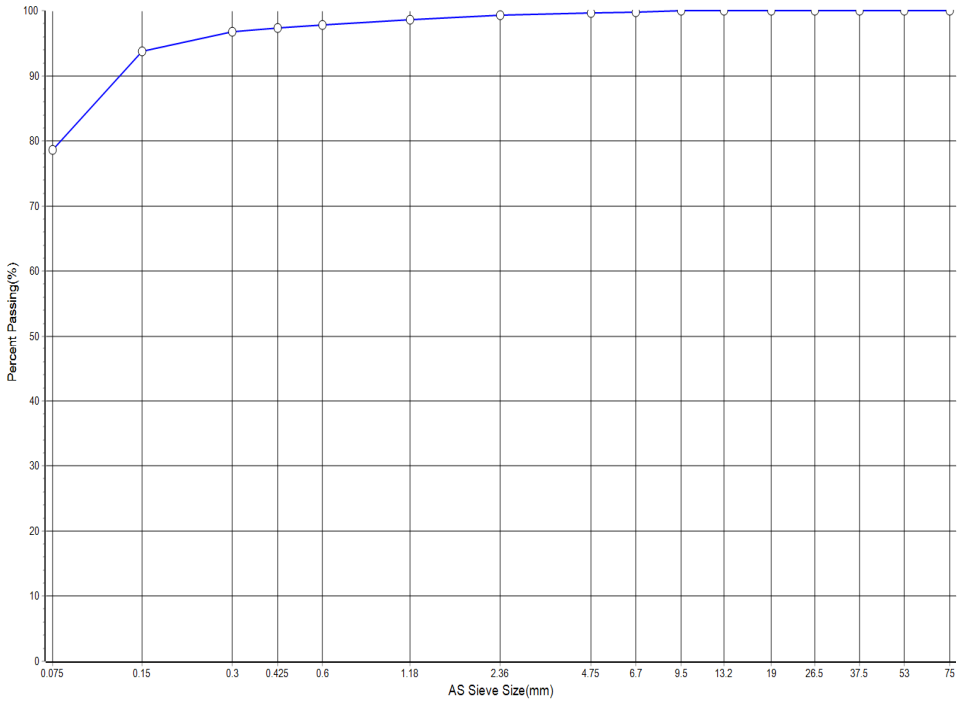
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NATA Accreditation No. 18563
ACN: 625 941 139 ABN: 17625941139
QBCC #: 15092731

Quality of Materials Report

Client :	**GEO Design**	Report Number:	**SI 804-22 - 3/1**
Address :	**14 Danbulan Street, Smithfield, QLD, 4878**	Report Date :	**9/12/2022**
Project Name :	**22092AA-D**	Order Number :	
Project Number :	**SI 804-22**	Test Method :	**AS1289.3.6.1**
Location:	**Daintree Ferry , Daintree**	**Page 2 of 8**	

Sample Number :	T-16302	SAMPLE LOCATION	
Sampling Method :	As Received	**AH02**	
Sampled By :	Client	**Depth 1.2-1.7m**	
Date Sampled :	23/11/2022		
Date Tested :	30/11/2022		
Material Type :		Test Number :	
Material Source :	Insitu	Lot Number :	
Remarks :	Test results only apply to the sample tested.	Specification Number :	

AS Sieve Size(mm)	Percent Passing	Specification Limits
100		
75.0	**100**	
63.0		
53.0	**100**	
37.5	**100**	
26.5	**100**	
19.0	**100**	
16.0		
13.2	**100**	
9.5	**100**	
6.7	**100**	
4.75	**100**	
2.36	**99**	
1.18	**99**	
0.600	**98**	
0.425	**97**	
0.300	**97**	
0.150	**94**	
0.075	**79**	



		Test Method	Results		
Liquid Limit (%) :		**AS1289.3.1.2, 3.2.1, 3.3.1, 3.4.1**	**30**	Shrinkage Comments :	**Cracking Occurred**
Plastic Limit (%) :			**23**	Mould Length (mm) :	**250.1**
Plasticity Index (%) :			**7**	Sample History	**Oven Dried**
Linear Shrinkage (%) :			**4**	Q252 Weighted PI (%):	**679**
Soil Description :					

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ACN: 625 941 139 ABN: 17625941139
QBCC #: 15092731

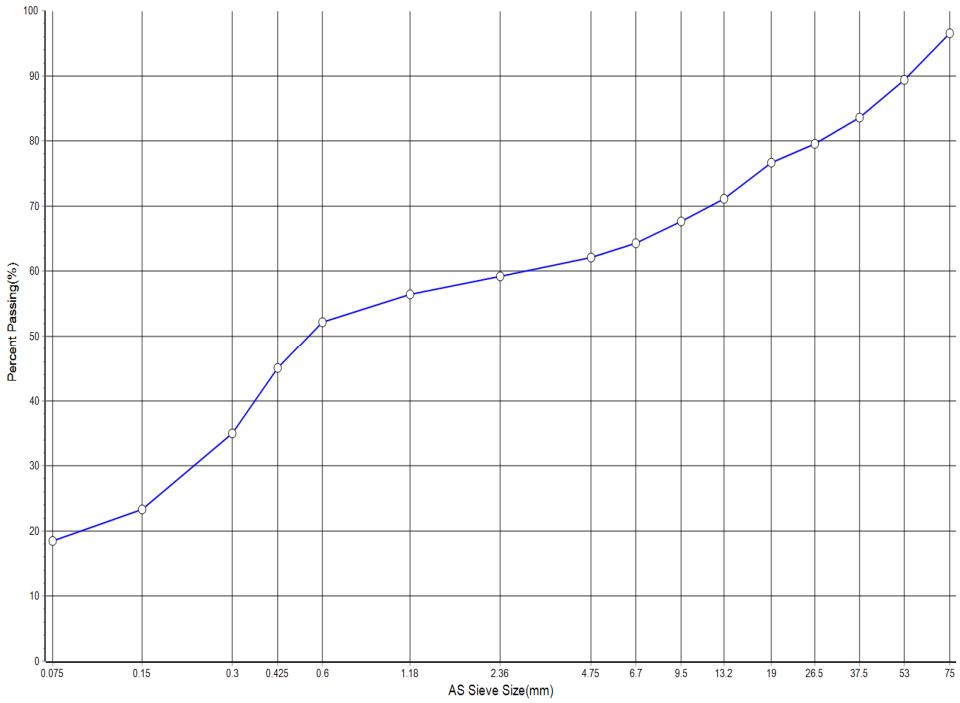
Quality of Materials Report

Client :	**GEO Design**	Report Number:	**SI 804-22 - 3/1**
Address :	**14 Danbulan Street, Smithfield, QLD, 4878**	Report Date :	**9/12/2022**
Project Name :	**22092AA-D**	Order Number :	
Project Number :	**SI 804-22**	Test Method :	**AS1289.3.6.1**
Location:	**Daintree Ferry , Daintree**	**Page 3 of 8**	

Sample Number :	T-16303
Sampling Method :	As Received
Sampled By :	Client
Date Sampled :	23/11/2022
Date Tested :	30/11/2022
Material Type :	
Material Source :	Insitu
Remarks :	Test results only apply to the sample tested.

SAMPLE LOCATION	
AH03	
Depth 0.1-0.5m	
Test Number :	
Lot Number :	
Specification Number :	

AS Sieve Size(mm)	Percent Passing	Specification Limits
100		
75.0	**97**	
63.0		
53.0	**89**	
37.5	**84**	
26.5	**80**	
19.0	**77**	
16.0		
13.2	**71**	
9.5	**68**	
6.7	**64**	
4.75	**62**	
2.36	**59**	
1.18	**56**	
0.600	**52**	
0.425	**45**	
0.300	**35**	
0.150	**23**	
0.075	**19**	



		Test Method	Results		
Liquid Limit (%) :		**AS1289.3.9.2, 3.2.1, 3.3.2, 3.4.1**	**24**	Shrinkage Comments :	**No Cracking or Crumbling**
Plastic Limit (%) :			**20**	Mould Length (mm) :	**250**
Plasticity Index (%) :			**4**	Sample History	**Oven Dried**
Linear Shrinkage (%) :			**2**	Q252 Weighted PI (%):	**180**
Soil Description :					

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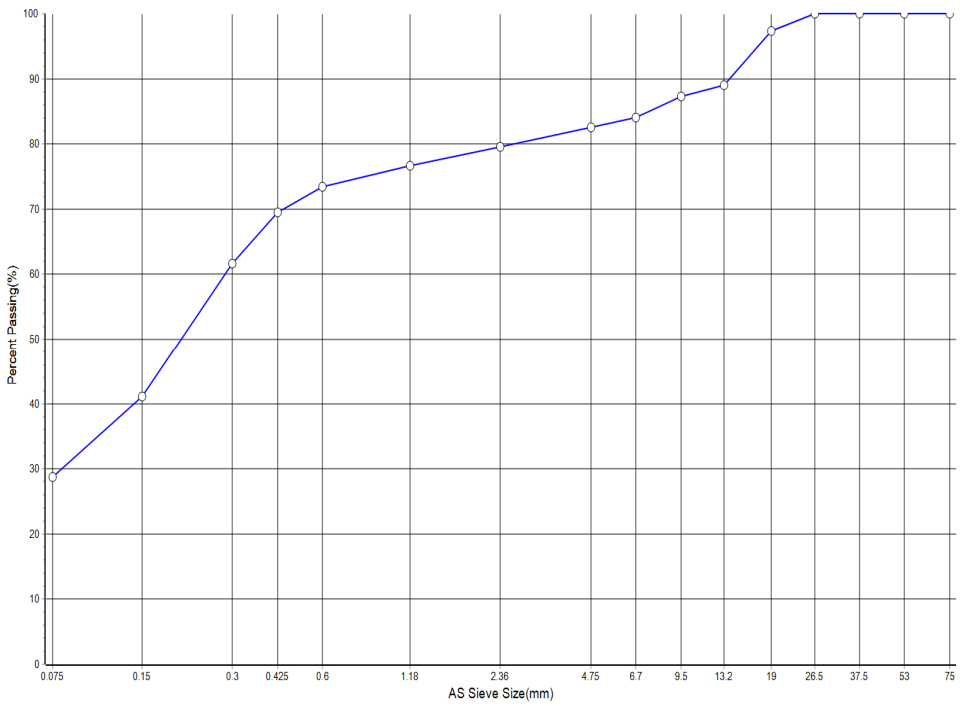
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Email: info@earthtest.com.au
NATA Accreditation No. 18563
ACN: 625 941 139 ABN: 17625941139
QBCC #: 15092731

Quality of Materials Report

Client :	**GEO Design**	Report Number:	**SI 804-22 - 3/1**
Address :	**14 Danbulan Street, Smithfield, QLD, 4878**	Report Date :	**9/12/2022**
Project Name :	**22092AA-D**	Order Number :	
Project Number :	**SI 804-22**	Test Method :	**AS1289.3.6.1**
Location:	**Daintree Ferry , Daintree**	**Page 4 of 8**	

Sample Number :	T-16304	SAMPLE LOCATION	
Sampling Method :	As Received	**AH04**	
Sampled By :	Client	**Depth 0.1-0.4m**	
Date Sampled :	23/11/2022		
Date Tested :	30/11/2022		
Material Type :		Test Number :	
Material Source :	Insitu	Lot Number :	
Remarks :	Test results only apply to the sample tested.	Specification Number :	

AS Sieve Size(mm)	Percent Passing	Specification Limits
100		
75.0	**100**	
63.0		
53.0	**100**	
37.5	**100**	
26.5	**100**	
19.0	**97**	
16.0		
13.2	**89**	
9.5	**87**	
6.7	**84**	
4.75	**83**	
2.36	**80**	
1.18	**77**	
0.600	**73**	
0.425	**70**	
0.300	**62**	
0.150	**41**	
0.075	**29**	



		Test Method	Results		
Liquid Limit (%) :		**AS1289.3.9.2, 3.2.1, 3.3.2, 3.4.1**	**26**	Shrinkage Comments :	**No Cracking or Crumbling**
Plastic Limit (%) :			**22**	Mould Length (mm) :	**250**
Plasticity Index (%) :			**4**	Sample History	**Oven Dried**
Linear Shrinkage (%) :			**3**	Q252 Weighted PI (%):	**280**
Soil Description :					

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ACN: 625 941 139 ABN: 17625941139
QBCC #: 15092731

Quality of Materials Report

Client :	**GEO Design**	Report Number:	**SI 804-22 - 3/1**
Address :	**14 Danbulan Street, Smithfield, QLD, 4878**	Report Date :	**9/12/2022**
Project Name :	**22092AA-D**	Order Number :	
Project Number :	**SI 804-22**	Test Method :	**AS1289.3.6.1**
Location:	**Daintree Ferry , Daintree**	**Page 5 of 8**	

Sample Number :	T-16305
Sampling Method :	As Received
Sampled By :	Client
Date Sampled :	23/11/2022
Date Tested :	1/12/2022
Material Type :	
Material Source :	Insitu
Remarks :	Test results only apply to the sample tested.

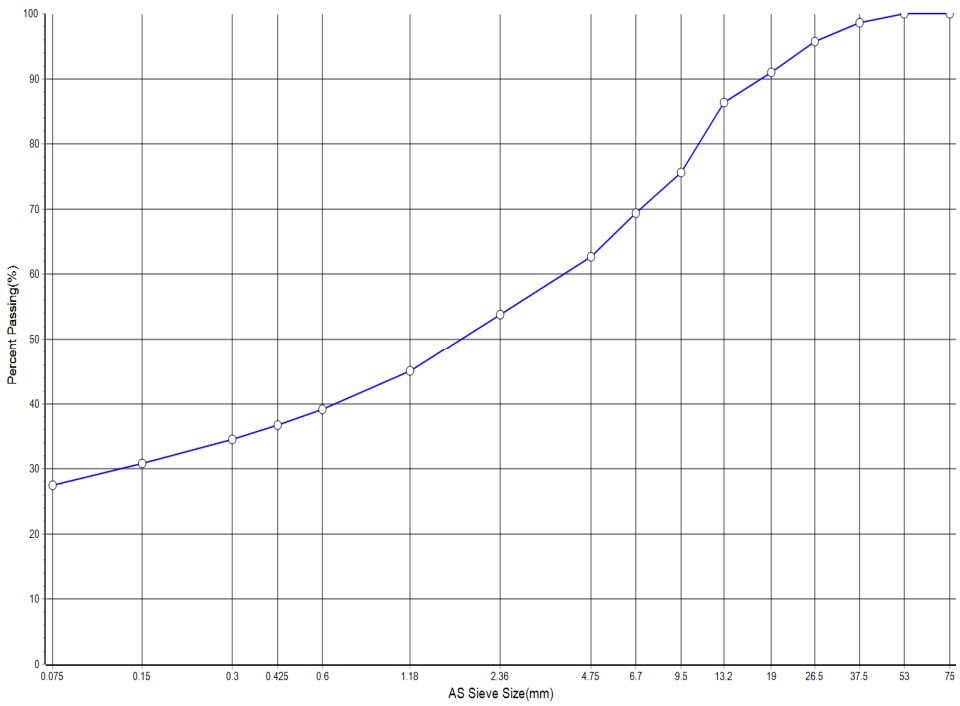
SAMPLE LOCATION

AH05

Depth 0.25-0.55m

Test Number :	
Lot Number :	
Specification Number :	

AS Sieve Size(mm)	Percent Passing	Specification Limits
100		
75.0	**100**	
63.0		
53.0	**100**	
37.5	**99**	
26.5	**96**	
19.0	**91**	
16.0		
13.2	**86**	
9.5	**76**	
6.7	**69**	
4.75	**63**	
2.36	**54**	
1.18	**45**	
0.600	**39**	
0.425	**37**	
0.300	**34**	
0.150	**31**	
0.075	**27**	



		Test Method	Results		
Liquid Limit (%) :		**AS1289.3.1.2, 3.2.1, 3.3.1, 3.4.1**	**29**	Shrinkage Comments :	**Cracking Occurred**
Plastic Limit (%) :			**19**	Mould Length (mm) :	**250.1**
Plasticity Index (%) :			**10**	Sample History	**Oven Dried**
Linear Shrinkage (%) :			**5**	Q252 Weighted PI (%):	**370**
Soil Description :					

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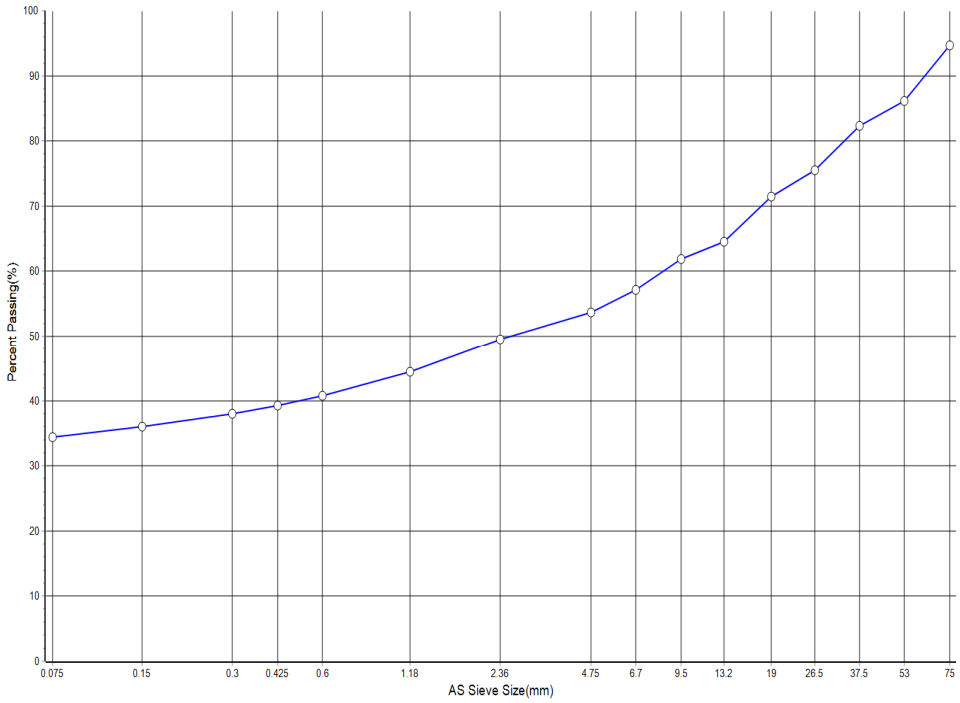
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QBCC #: 15092731

Quality of Materials Report

Client :	**GEO Design**	Report Number:	**SI 804-22 - 3/1**
Address :	**14 Danbulan Street, Smithfield, QLD, 4878**	Report Date :	**9/12/2022**
Project Name :	**22092AA-D**	Order Number :	
Project Number :	**SI 804-22**	Test Method :	**AS1289.3.6.1**
Location:	**Daintree Ferry , Daintree**	**Page 6 of 8**	

Sample Number :	T-16306	SAMPLE LOCATION	
Sampling Method :	As Received	**AH06**	
Sampled By :	Client	**Depth 0.1-0.6m**	
Date Sampled :	23/11/2022		
Date Tested :	1/12/2022		
Material Type :		Test Number :	
Material Source :	Insitu	Lot Number :	
Remarks :	Test results only apply to the sample tested.	Specification Number :	

AS Sieve Size(mm)	Percent Passing	Specification Limits
100		
75.0	**95**	
63.0		
53.0	**86**	
37.5	**82**	
26.5	**76**	
19.0	**71**	
16.0		
13.2	**65**	
9.5	**62**	
6.7	**57**	
4.75	**54**	
2.36	**50**	
1.18	**44**	
0.600	**41**	
0.425	**39**	
0.300	**38**	
0.150	**36**	
0.075	**34**	



		Test Method	Results		
Liquid Limit (%) :		**AS1289.3.1.2, 3.2.1, 3.3.1, 3.4.1**	**31**	Shrinkage Comments :	**Cracking Occurred**
Plastic Limit (%) :			**22**	Mould Length (mm) :	**250.2**
Plasticity Index (%) :			**9**	Sample History	**Oven Dried**
Linear Shrinkage (%) :			**3**	Q252 Weighted PI (%):	**351**
Soil Description :					

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NATA Accreditation No. 18563
ACN: 625 941 139 ABN: 17625941139
QBCC #: 15092731

Quality of Materials Report

Client :	**GEO Design**	Report Number:	**SI 804-22 - 3/1**
Address :	**14 Danbulan Street, Smithfield, QLD, 4878**	Report Date :	**9/12/2022**
Project Name :	**22092AA-D**	Order Number :	
Project Number :	**SI 804-22**	Test Method :	**AS1289.3.6.1**
Location:	**Daintree Ferry , Daintree**	**Page 7 of 8**	

Sample Number :	T-16307
Sampling Method :	As Received
Sampled By :	Client
Date Sampled :	23/11/2022
Date Tested :	1/12/2022
Material Type :	
Material Source :	Insitu
Remarks :	Test results only apply to the sample tested.

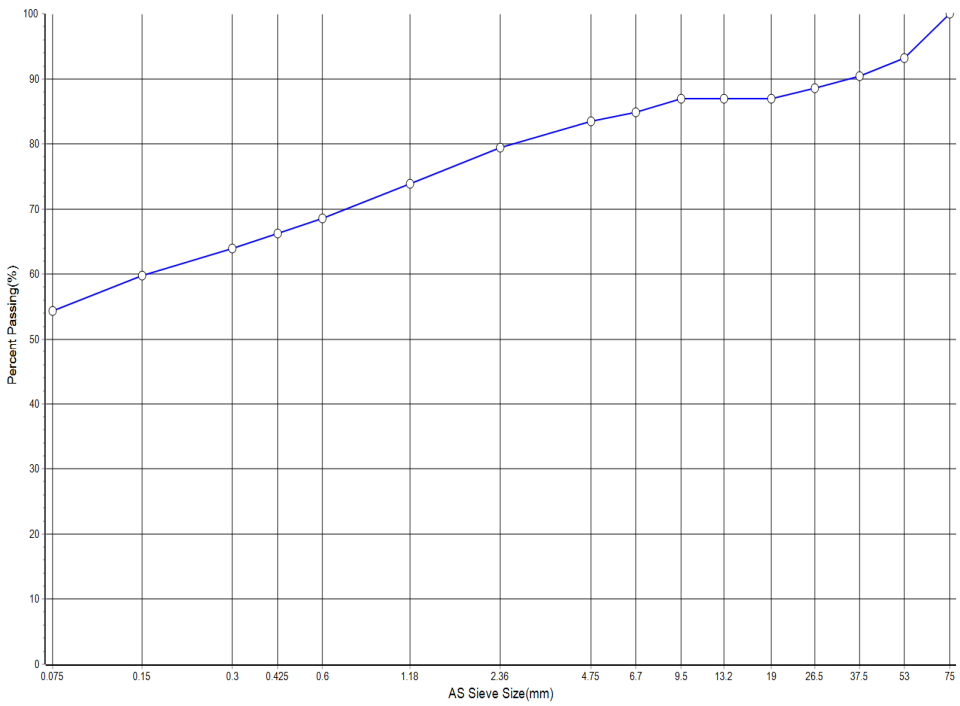
SAMPLE LOCATION

AH07

Depth 1.0-1.4m

Test Number :	
Lot Number :	
Specification Number :	

AS Sieve Size(mm)	Percent Passing	Specification Limits
100		
75.0	**100**	
63.0		
53.0	**93**	
37.5	**90**	
26.5	**89**	
19.0	**87**	
16.0		
13.2	**87**	
9.5	**87**	
6.7	**85**	
4.75	**84**	
2.36	**79**	
1.18	**74**	
0.600	**69**	
0.425	**66**	
0.300	**64**	
0.150	**60**	
0.075	**54**	



		Test Method	Results		
Liquid Limit (%) :		**AS1289.3.1.2, 3.2.1, 3.3.1, 3.4.1**	**37**	Shrinkage Comments :	**No Cracking or Crumbling**
Plastic Limit (%) :			**27**	Mould Length (mm) :	**250.3**
Plasticity Index (%) :			**10**	Sample History	**Oven Dried**
Linear Shrinkage (%) :			**3.5**	Q252 Weighted PI (%):	**660**
Soil Description :					

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ACN: 625 941 139 ABN: 17625941139
QBCC #: 15092731

Quality of Materials Report

Client :	**GEO Design**	Report Number:	**SI 804-22 - 3/1**
Address :	**14 Danbulan Street, Smithfield, QLD, 4878**	Report Date :	**9/12/2022**
Project Name :	**22092AA-D**	Order Number :	
Project Number :	**SI 804-22**	Test Method :	**AS1289.3.6.1**
Location:	**Daintree Ferry , Daintree**	**Page 8 of 8**	

Sample Number :	T-16308
Sampling Method :	As Received
Sampled By :	Client
Date Sampled :	23/11/2022
Date Tested :	1/12/2022
Material Type :	
Material Source :	Insitu
Remarks :	Test results only apply to the sample tested.

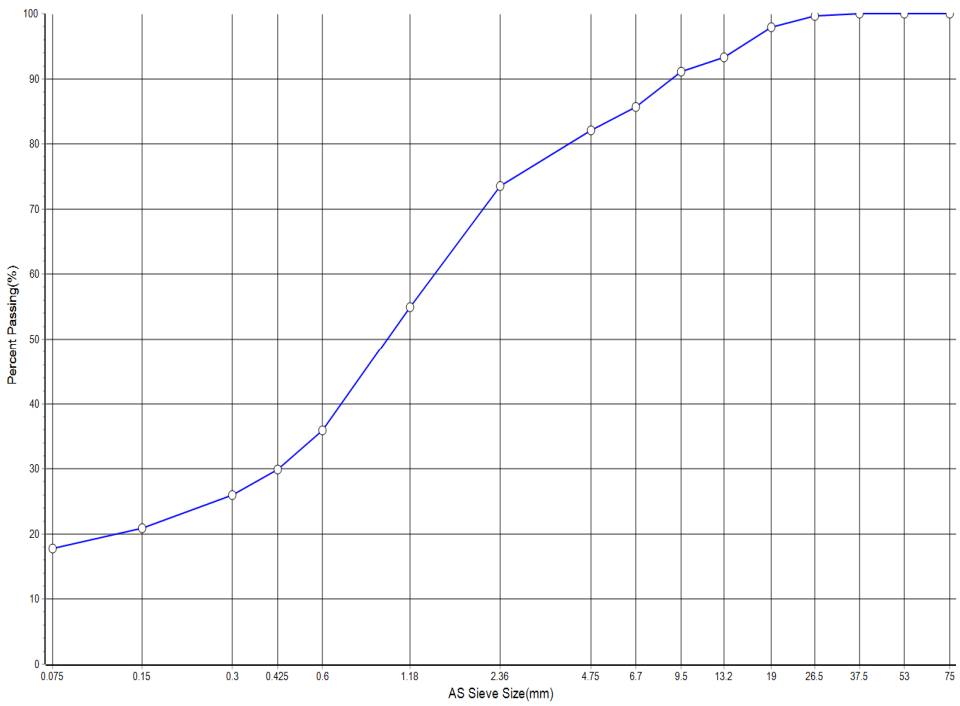
SAMPLE LOCATION

AH09

Depth 0.1-0.4m

Test Number :	
Lot Number :	
Specification Number :	

AS Sieve Size(mm)	Percent Passing	Specification Limits
100		
75.0	**100**	
63.0		
53.0	**100**	
37.5	**100**	
26.5	**100**	
19.0	**98**	
16.0		
13.2	**93**	
9.5	**91**	
6.7	**86**	
4.75	**82**	
2.36	**74**	
1.18	**55**	
0.600	**36**	
0.425	**30**	
0.300	**26**	
0.150	**21**	
0.075	**18**	



		Test Method	Results		
Liquid Limit (%) :		**AS1289.3.9.2, 3.2.1, 3.3.2, 3.4.1**	**24**	Shrinkage Comments :	**No Cracking or Crumbling**
Plastic Limit (%) :			**20**	Mould Length (mm) :	**250**
Plasticity Index (%) :			**4**	Sample History	**Oven Dried**
Linear Shrinkage (%) :			**2**	Q252 Weighted PI (%):	**120**
Soil Description :					

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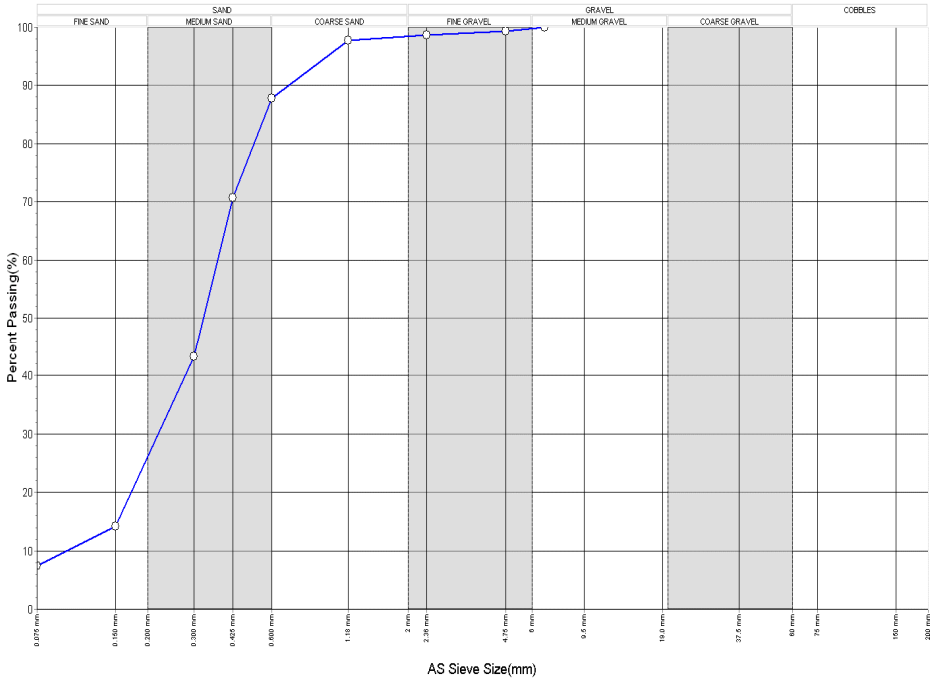
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Phone 07 4774 7888 **Fax** 07 4774 7677
Email admin@soilengineeringservices.com
www.soilengineeringservices.com
ABN 34 149 057 182

Quality of Materials Report

Client :	**Geo Group**	Report Number:	**TS23163 - 1**
Address :	**14 Danbulan Street, Smithfield, QLD, 4878**	Report Date :	**2/12/2022**
Project Name :	**22092AA-D Daintree Ferry**	Order Number :	**877**
Project Number :	**TS23163**	Test Method :	**AS1289.3.6.1**
Location:	**Daintree Ferry , Queensland**	**Page 1 of 1**	

Sample Number :	22-12633	SAMPLE LOCATION	
Sampling Method :	As Received	**Road Name: Daintree Ferry**	
Sampled By :	Client Sampled	**Test Pit Number: AH08**	
Date Sampled :	29/11/2022	**Depth: 0.1m - 0.6m**	
Date Tested :	1/12/2022	**Desc: Refer to logs**	
Material Type :	-	Test Number :	**877**
Material Source :	Refer to logs	Lot Number :	**22092AA-D**
Remarks :	Nata accrediation does not cover the performance of sampling.	Specification Number :	

AS Sieve Size(mm)	Percent Passing	Specification Limits
100		
75.0		
63.0		
53.0		
37.5		
26.5		
19.0		
16.0		
13.2		
9.5		
6.7	**100**	
4.75	**99**	
2.36	**99**	
1.18	**98**	
0.600	**88**	
0.425	**71**	
0.300	**43**	
0.150	**14**	
0.075	**7**	



		Test Method	Results		
Liquid Limit (%) :		**AS1289.3.9.2, 3.2.1, 3.3.1, 3.3.2 & 3.4.1**	**26**	Shrinkage Comments :	**Crumbling Occurred**
Plastic Limit (%) :			**23**	Mould Length (mm) :	**250**
Plasticity Index (%) :			**3**	Sample History	**Oven Dried**
Linear Shrinkage (%) :			**0**	Sample Preperation:	**Oven Dried**
Soil Description :					

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Lui Moti - Senior Technician
NATA Accreditation Number 2856

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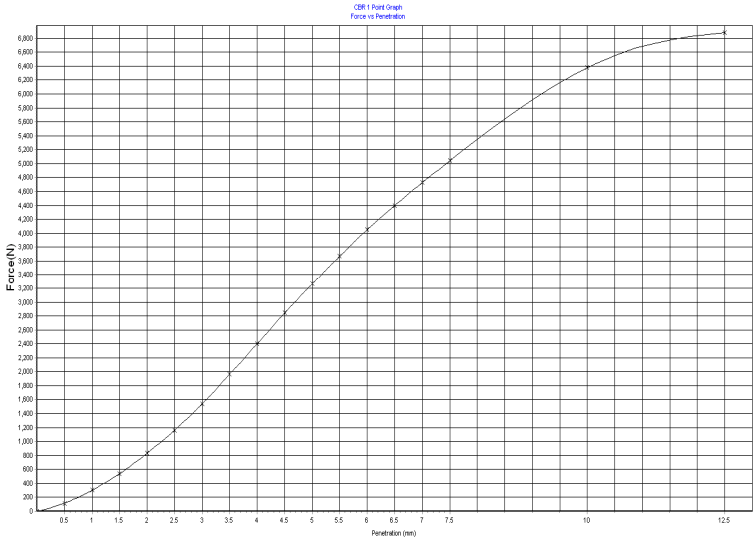
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ABN 34 149 057 182

California Bearing Ratio Report (1 Point)

Client :	**Geo Group**	Report Number:	**TS23163 - 2/1**
Address :	**14 Danbulan Street, Smithfield, QLD, 4878**	Report Date :	**7/12/2022**
Project Number :	**TS23163**	Order Number :	**877**
Project Name :	**22092AA-D Daintree Ferry**	Test Method :	**AS1289.6.1.1**
Location:	**Daintree Ferry , Queensland**	**Page 1 of 1**	

Sample Number :	22-12633	SAMPLE LOCATION
Date Sampled :	29/11/2022	Road Name: Daintree Ferry
Date Tested :	2/12/2022	Test Pit Number: AH08
Sampled By :	Client Sampled	Depth: 0.1m - 0.6m
Sampling Method :	As Received	Desc: Refer to logs
Material Source :	Refer to logs	**Lot Number : 22092AA-D**
Material Type :	-	**Test Request Number : 877**
Remarks :	Nata accrediation does not cover the performance of sampling.	

Moisture Method :	AS1289.2.1.1
Maximum Dry Density (t/m³) :	1.54
Optimum Moisture Content (%) :	26.0
Compactive Effort :	Standard
Nominated Percentage of MDD :	98
Nominated Percentage of OMC :	100
Achieved Percentage of MDD :	98
Achieved Percentage of OMC :	100.0
Dry Density Before Soak (t/m³) :	1.51
Dry Density After Soak (t/m³) :	1.51
Moisture Content Before Soak (%) :	26.1
Moisture Content After Soak (%) :	23.9
Density Ratio After Soak (%) :	98.0
Field Moisture Content (%) :	22.2
Top Moisture Content - After Penetration (%) :	19.6
Total Moisture Content - After Penetration (%) :	18.8
Soak Condition :	Soaked
Soak Period (days) :	4
Swell (%) :	0.0



CBR Surcharge (kg) :	4.5	Bearing Ratio 2.5mm (%) :	17.0
Oversize (%) :		Bearing Ratio 5.0mm (%) :	20.0
Oversize Material Replaced (%) :		**CBR Value (%) :**	**20.0**

Site Selection :	
Soil Description :	

NATA

Accredited for compliance with ISO/IEC 17025 - Testing

APPROVED SIGNATORY

Lui Moti - Senior Technician
NATA Accreditation Number : 2856

ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS		LABORATORY DETAILS	
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Project	**22092AA-D Daintree Ferry**	SGS Reference	**CE163192 R0**
Order Number	**876**	Date Received	28 Nov 2022
Samples	2	Date Reported	02 Dec 2022

COMMENTS

Accredited for compliance with ISO/IEC 17025 - Testing. NATA accredited laboratory 2562(3146/19038)

SIGNATORIES

Alyson BERGAMO
Senior Laboratory Technician

Anthony NILSSON
Operations Manager

Jon Dicker
Manager Northern QLD

Mitsuko BALDWIN
Metals Team Leader

Parameter	Units	LOR	Sample Number: CE163192.001 Sample Matrix: Soil Sample Date: 24 Nov 2022 Sample Name: BH02 SPT_5.5-5.95	Sample Number: CE163192.002 Sample Matrix: Soil Sample Date: 24 Nov 2022 Sample Name: BH03 SPT_4.0-4.45
pH in soil (1:2) Method: AN101 Tested: 29/11/2022				
pH (1:2)	pH Units	-	**5.1**	**8.1**
Conductivity (1:2) in soil Method: AN106 Tested: 29/11/2022				
Conductivity (1:2) @25 C	µS/cm	1	**1000**	**3100**
Resistivity (1:2)*	ohm cm	-	**960**	**330**
Resistivity (1:2)*	ohm m	1	**10**	**3**
Chloride (water extractable) Method: AN274 Tested: 1/12/2022				
Chloride (water extractable 1:2)	mg/kg	5	**480**	**2400**
Water Soluble Metals in Soil by ICPOES From 1:2 extract Method: AN002/AN320 Tested: 29/11/2022				
Sulfur, S	mg/kg	1	**68**	**69**
Sulfur as Sulfate, SO4	mg/kg	3	**200**	**210**

MB blank results are compared to the Limit of Reporting
LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.
DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula : *the absolute difference of the two results divided by the average of the two results as a percentage.* Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

Chloride (water extractable) **Method: ME-(AU)-[ENV]AN274**

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
Chloride (water extractable 1:2)	LB109994	mg/kg	5	<5	109%

Water Soluble Metals in Soil by ICPOES From 1:2 extract **Method: ME-(AU)-[ENV]AN002/AN320**

Parameter	QC Reference	Units	LOR	MB	LCS %Recovery
Sulfur, S	LB109908	mg/kg	1	<1	103%
Sulfur as Sulfate, SO4	LB109908	mg/kg	3	<3	103%

METHOD	METHODOLOGY SUMMARY
AN002/AN320	Soil sample is extracted in deionised water (1:2 or 1:5) and metals analysed by ICP OES, method AN320/AN321, with results reported on the dried sample basis.
AN101	pH in Soil Sludge Sediment and Water: pH is measured electrometrically using a combination electrode and is calibrated against 3 buffers purchased commercially. For soils, an extract with water is made at a ratio of 1:2 and the pH determined and reported on the extract after 1 hour extraction (pH 1:2) or after 1 hour extraction and overnight aging (pH (1:2) aged). Reference APHA 4500-H+.
AN106	Conductivity : Conductivity is measured by meter with temperature compensation and is calibrated against a standard solution of potassium chloride. Conductivity is generally reported as µmhos/cm or µS/cm @ 25°C. For soils, an extract of as received sample with water is made at a ratio of 1:2 and the EC determined and reported on the extract basis after the 1 hour extraction (EC(1:2)) or after the 1 hour extraction and overnight aging (EC(1:2) aged). Reference APHA 2510 B.
AN106	Resistivity of the extract is reported on the extract basis and is the reciprocal of conductivity. Salinity and TDS can be calculated from the extract conductivity and is reported back to the soil basis.
AN274	Chloride by DA following 1:5 or 1:2 DI water extraction: Chloride reacts with mercuric thiocyanate forming a mercuric chloride complex. In the presence of ferric iron, highly coloured ferric thiocyanate is formed which is proportional to the chloride concentration. Results reported on dry sample basis. Reference APHA 4500Cl-

FOOTNOTES

IS	Insufficient sample for analysis.	LOR	Limit of Reporting
LNR	Sample listed, but not received.	↑↓	Raised or Lowered Limit of Reporting
*	NATA accreditation does not cover the performance of this service.	QFH	QC result is above the upper tolerance
		QFL	QC result is below the lower tolerance
**	Indicative data, theoretical holding time exceeded.	-	The sample was not analysed for this analyte
***	Indicates that both * and ** apply.	NVL	Not Validated

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received.
Solid samples expressed on a dry weight basis.

Where "Total" analyte groups are reported (for example, Total PAHs, Total OC Pesticides) the total will be calculated as the sum of the individual analytes, with those analytes that are reported as <LOR being assumed to be zero. The summed (Total) limit of reporting is calcuated by summing the individual analyte LORs and dividing by two. For example, where 16 individual analytes are being summed and each has an LOR of 0.1 mg/kg, the "Totals" LOR will be 1.6 / 2 (0.8 mg/kg). Where only 2 analytes are being summed, the " Total" LOR will be the sum of those two LORs.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

If reported, measurement uncertainty follow the ± sign after the analytical result and is expressed as the expanded uncertainty calculated using a coverage factor of 2, providing a level of confidence of approximately 95%, unless stated otherwise in the comments section of this report.

Results reported for samples tested under test methods with codes starting with ARS-SOP, radionuclide or gross radioactivity concentrations are expressed in becquerel (Bq) per unit of mass or volume or per wipe as stated on the report. Becquerel is the SI unit for activity and equals one nuclear transformation per second.
Note that in terms of units of radioactivity:

a. 1 Bq is equivalent to 27 pCi
b. 37 MBq is equivalent to 1 mCi

For results reported for samples tested under test methods with codes starting with ARS-SOP, less than (<) values indicate the detection limit for each radionuclide or parameter for the measurement system used. The respective detection limits have been calculated in accordance with ISO 11929.

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-gb/environment-health-and-safety.

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Appendix J

Ecological Assessment, dated July 2025, by 4 Elements



Ecological Assessment

Daintree Ferry Terminal Upgrade

July 2025 (Version 2.0)

4 elements

Ecological Assessment

Daintree Ferry Terminal Upgrade – July 2025 (Version 2.0)

Revision History – Doc # R2024-244

Version	Purpose	Issued by	Date	Reviewer	Date
0.1	Draft	Ryan Hughes	15/07/2024	Dr Mark Nadir Runkovski	23/07/2024
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1.0	First version	Dr Mark Nadir Runkovski	16/08/2024	Robert Latham	16/08/2024
2.0	Final	Dr Mark Nadir Runkovski	29/07/2025	Robert Latham	29/07/2025

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Appendix B Wildlife Online (NCA)

Appendix C Matters of State Environmental Significance

Appendix D Regulated Vegetation Mapping

Appendix E Potential Occurrence Assessment

Appendix F EPBC Act 1999 Significant Impact Assessment (SIA)

Appendix G NC Act 1992 Significant Residual Impact Assessment (SRI)

Appendix H Flora Trigger Mapping

Appendix I Complete Flora List (red indicates EVNT species)

1.0 Introduction

Four Elements Consulting was contracted by Douglas Shire Council to undertake an Ecological Assessment (EA) for a proposal which seeks to increase the passenger vehicle capacity of the existing Daintree River Ferry terminal. This EA was undertaken to identify the potential for any significant impact to Matters of National Environmental Significance (MNES), Matters of State Environmental Significance (MSES) and Matters of Local Environmental Significance (MLES) as a result of establishing the proposal. The field survey for the completion of this report was carried out by 4 Elements Consulting senior ecologist Ryan Hughes over two (2) consecutive days between 13 - 14 March 2023. An updated survey effort was also undertaken with senior ecologists Dr Mark Nadir Runkovski and Ryan Hughes between 8 – 9 July 2024.

1.1 Project site description

The project site is located approximately 8 km east of the town of Daintree on the Daintree River (see **Figure 1** below). The proposal seeks to add additional infrastructure to the existing Daintree River Ferry Terminal on both the southern and northern approaches. As far as practical, the alignment is located within category X non-remnant or category R high-value reef regrowth. Despite this there is a requirement for the proposal to impact a total disturbance footprint of **0.93 ha**. Of this area, the following clearing will be required:

- (**0.02 ha**) Category B remnant vegetation under the *Vegetation Management Act 1999* (VM Act 1999)
- (**0.3 ha**) Essential habitat under the *Vegetation Management Act 1999* (VM Act 1999)
- (**0.3 ha**) Wildlife habitat under the Queensland *Nature Conservation Act 1992*
- (**0.24 ha**) High ecological significance wetland under the Queensland *Environmental Protection Act 1994*
- (**0.4 ha**) Marine plants under the Queensland *Fisheries Act 1994*

The above is a summary of the required clearances for the proposal within and adjacent to the ferry terminal infrastructure's existing footprint (see **Figure 2** and **Figure 3** below).

The project site is located near to intensive horticultural industries, tourist and recreational infrastructure and conservation reserves. As part of the concept design proposal, vegetation clearing is required to establish the following footprint. Communication with Douglas Shire Council (Robert Latham, pers. comm. 17 July 2024) provided further detail on the specific proposed clearing and related works, which are:

Southern side of Daintree River

- Widening of the current alignment of Cape Tribulation Road upon approach of pull-off to Solar Whisper Wildlife Cruises by one (1) lane to the northwest (**Figure 2**, Part A)
- Widening of the current alignment of Cape Tribulation Road after the pull-off to Solar Whisper Wildlife Cruises by one (1) lane to the northwest to account for installation of a ticketing office/checkpoint (**Figure 2**, Part B)

- Installation of additional four to six (4-6) lanes to the centre of the current alignment of Cape Tribulation Road upon approach to the ferry to allow for separation of visitor boarding and exiting lanes from locals/permit-holders boarding and exiting lanes (**Figure 2**, Part C)
- Dredging area to address new future wider vessel and partitioning of a storage area for dredged material including for testing and reallocation. The storage area is designated within a set-down area previously cleared to the southeast of the alignment (**Figure 2**, Part D)

Northern side of Daintree River

- Widening of Cape Tribulation Road to the northwest of the current alignment from two (2) lanes to four (4) lanes up until the junction with Forest Creek Road (**Figure 2**, Part E)
- Widening of Cape Tribulation Road to the southwest of the current alignment from two (2) lanes to four (4) lanes after the junction with Forest Creek Road (**Figure 2**, Part F)

For the purposes of this report,

- The proposal is defined as the proposed additional ferry infrastructure alignment
- The project site is the area of vegetation within 100 m of the proposed alignment
- The locality is within ~10 km of the project site
- The region is the Wet Tropics Bioregion

1.2 Scope of works

The objectives of this assessment were to:

- Undertake a desktop review to identify the potential for the proposed project to impact on MSES and/or MNES, as well as Matters of Local Environmental Significance (MLES) within the property
- Assess the likelihood of the proposal having a significant impact on any threatened community, flora and fauna species or populations listed under the Queensland *Nature Conservation Act 1992* (NC Act 1992) and/or the Australian Government *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act 1999)
- Determine the impact to marine plants and waterway barrier works within the proposed alignment as defined under the *Fisheries Act 1994*
- Provide recommendations to reduce impacts to environmental values, sensitive environments, and populations of threatened flora and fauna
- Identify the necessary approvals and any additional works required to meet statutory requirements related to managing ecological assets within the property.

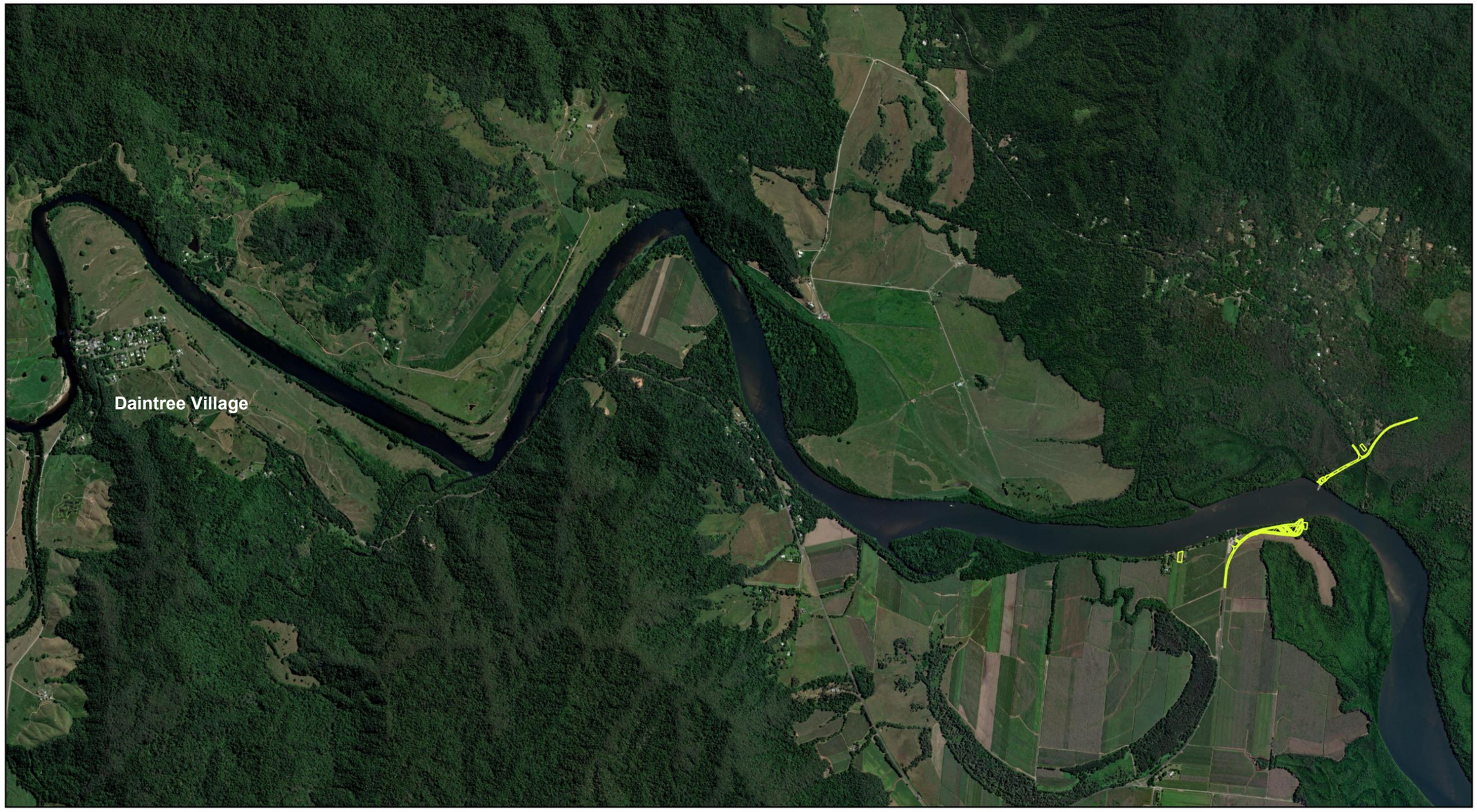
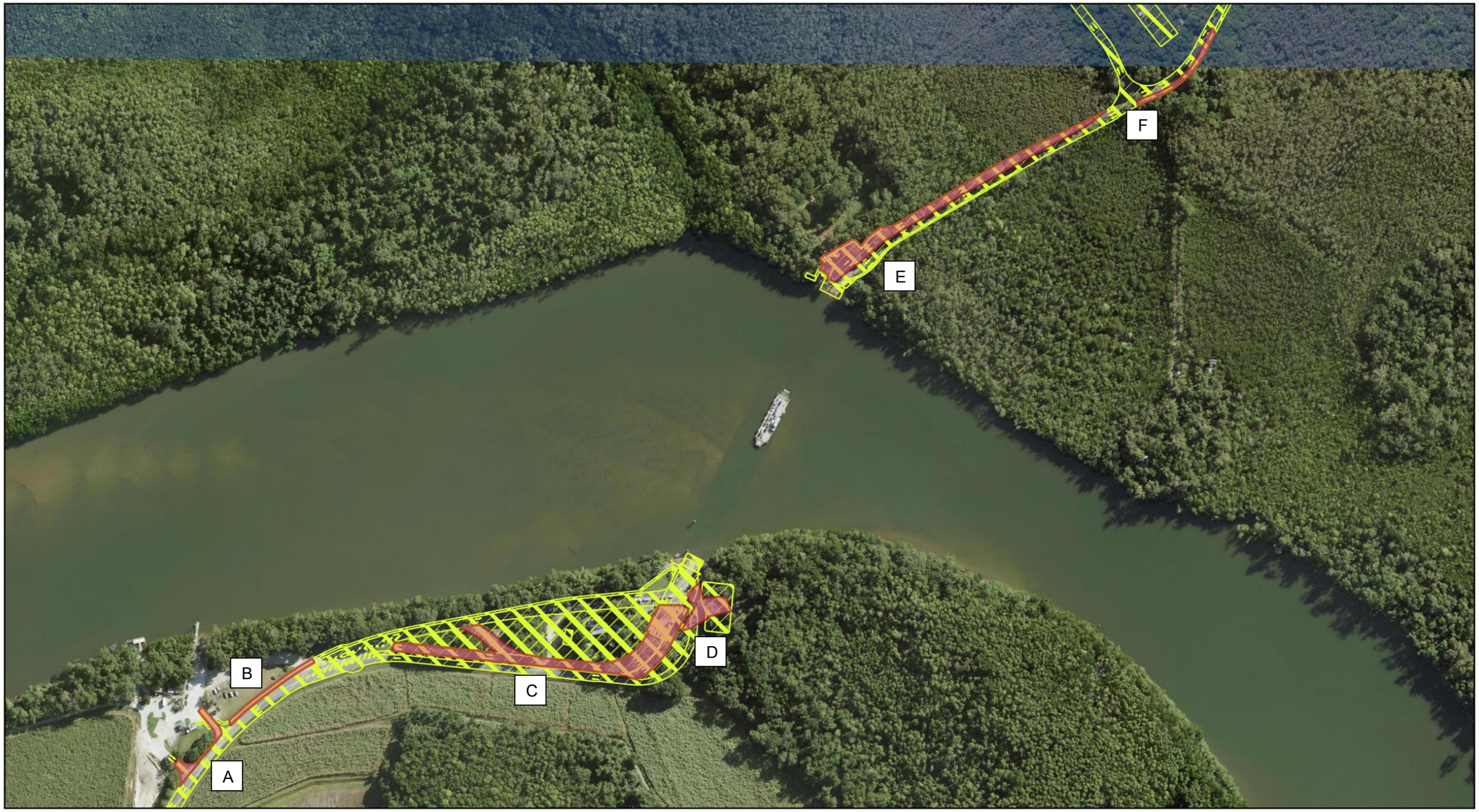


Figure 1. Location of the project site



0 150 300 m

Daintree Ferry 2024 Update
Project Alignment

Daintree Ferry proposed clearing area
Daintree Ferry total footprint
QLD Globe imagery

4 elements

Client: Douglas Shire Council
PM: Ryan Hughes
Date: 31/07/2024
Version: 2.0
Projection: GDA_2020_Zone 56S

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Figure 2. Map of the project alignment within the project site

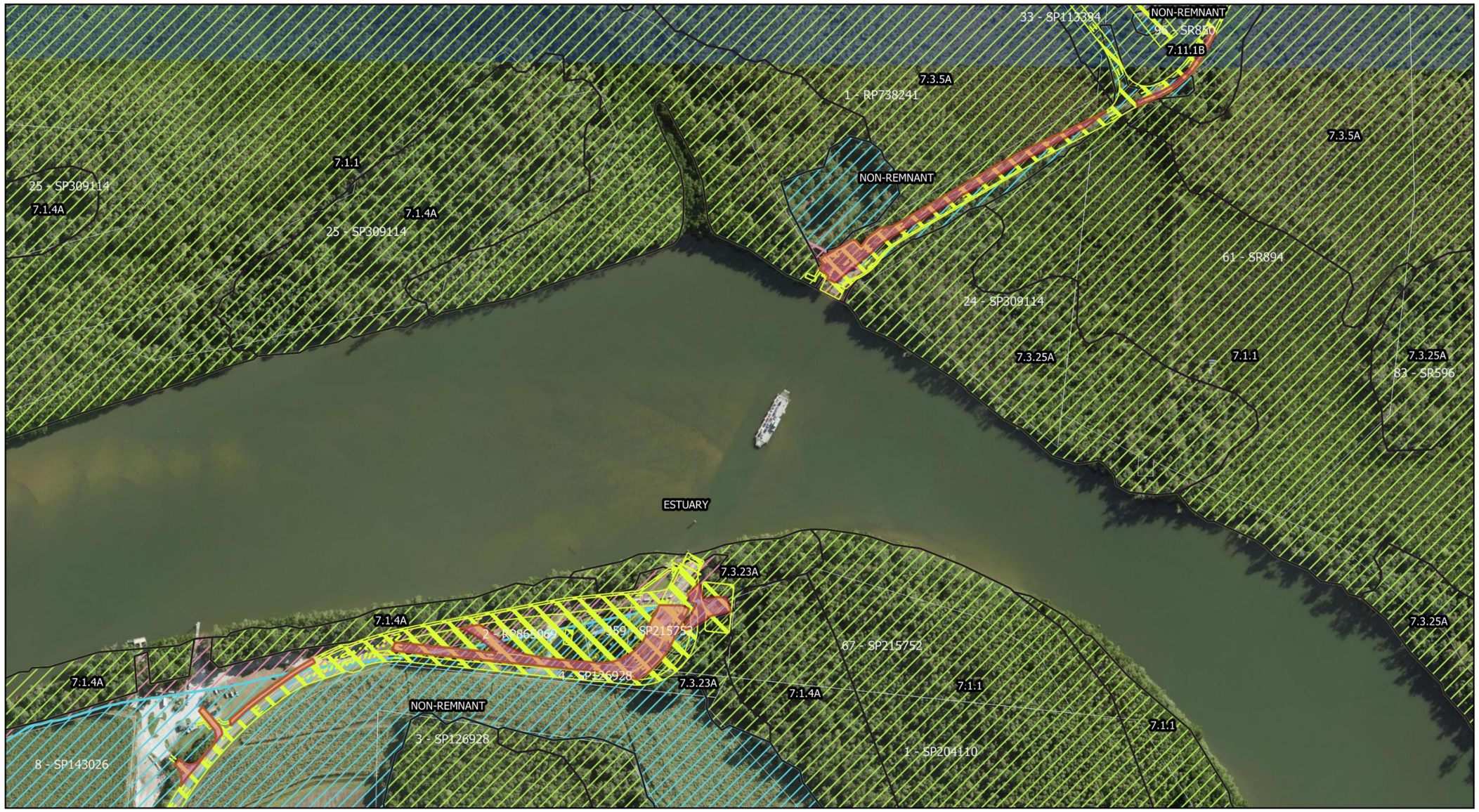


Figure 3. Project alignment within regulated vegetation

1.3 Statutory considerations

The following legislation (**Table 1**) are relevant to identifying ecological values, providing guidance for the assessment of potential project impacts, and identifying environmental constraints to project activities. These legislation and guidance documents have been considered in this report and the appendices provided.

Table 1. Statutory legislation applied to the property and project site

Legislative Act	Brief Description
Commonwealth Legislation	
Environment Protection and Biodiversity Conservation Act 1999	The EPBC Act 1999 provides a mechanism for assessing the environmental impact of activities and development where MNES may be significantly impacted. The Act identifies nine (9) MNES, which require consideration and analysis, namely: ▸ Ramsar wetland of international importance ▸ World Heritage properties ▸ National Heritage places ▸ Commonwealth Marine areas ▸ Great Barrier Reef Marine Park ▸ Nationally listed threatened species and ecological communities ▸ Nationally listed migratory species ▸ Nuclear actions (including uranium mining) ▸ Water resources in relation to coal seam gas and large coal mining development Where a project or action is believed to potentially cause a significant impact on an MNES, it is to be referred to the Australian Government Department of Climate Change, Energy, Environment and Water (DCCEEW) for assessment as to whether the action is a 'controlled action' requiring Commonwealth approval. The EPBC Act 1999 processes also allow voluntary referral of a project to seek confirmation that it will not have significant impacts on MNES. Where an action requires Commonwealth approval, a formal assessment process is undertaken in accordance with provisions of relevant legislation.
State Legislation	
Vegetation Management Act 1999	The VM Act 1999 is the planning initiative underlying regional management of vegetation in Queensland, including clearing of vegetation types, termed Regional Ecosystems (REs). The RE classification is a hierarchical system formed by a three-part code with the primary subdivision being bioregion, followed by land zone, and then vegetation. The biogeographic region or bioregion is the primary level of classification for biodiversity values in Queensland describing where the RE is found on a state-wide basis. Land zones are geological and geomorphic categories that describe the major geologies and landforms of Queensland. The system is based primarily on geology, with geologic age considered an important determinant. The status of REs is based on their pre-clearing and remnant extent and is gazetted under the Act and listed in the RE Description Database (REDD) maintained by the Queensland Department of Environment, Science, and Innovation (DESI).

Legislative Act	Brief Description
	The VMA aims to conserve remnant endangered and of concern REs, prevent land degradation and further loss of biodiversity, manage the environmental impacts of clearing vegetation, and reduce greenhouse emissions. The VMA status of an RE is described in line with the following: ▸ Endangered. An RE that is prescribed under the regulation and has either of the following attributes: ❖ Less than 10% of its pre-clearing extent remaining; or ❖ From 10% to 30% of its pre-clearing extent remaining and the remnant vegetation remaining is less than 10,000 ha. ▸ Of Concern. An RE that is prescribed under the regulation and has either of the following attributes: ❖ From 10% to 30% of its pre-clearing extent remaining; or ❖ More than 30% of its pre-clearing extent remaining and the remnant vegetation remaining is less than 10,000 ha ▸ Least Concern. An RE that is prescribed under the regulation and has either of the following attributes: ❖ Has more than 30% of its pre-clearing extent remaining; and ❖ The remnant vegetation remaining is more than 10,000 ha The biodiversity status of an RE is classified by DESI based on the condition of remnant vegetation. An RE will have a vegetation management status and/or a biodiversity status of Endangered, Of Concern or Least Concern. Essential Habitat. The VMA also has provision for the regulation of essential habitat for species of state significance. Essential habitat (mapped by DESI) is vegetation in which a listed species has been known to occur. Clearing or disturbance to areas of essential habitat will require compensatory habitat measures to be developed. For the project development area, core habitat has been used to describe the combination of critical or essential habitat for both national and state listed significant species.
Planning Act 2016	The *Planning Act 2016* establishes the framework for Queensland's planning system. The purpose of the legislation is to establish an efficient and accountable system of land-use planning and development assessment that will lead to ecological sustainability. The Act defines ecological sustainability as a balance between: ▸ The protection of ecological processes and natural systems at local, regional, state and national levels, and ▸ The cultural, economic, physical, and social wellbeing of Queenslanders. The Planning Regulation (2017) and the State Planning Policy (2017) are to guide local and state government in land use planning and development by defining the Queensland Government policies relating to matters of State interest under the Act.
Nature Conservation Act 1999	The NC Act 1992 aims to conserve nature through strategies such as dedicating and declaring protected areas for those parts of Queensland with outstanding biological diversity, natural features, and wilderness values. This Act provides for the protection of special least concern, near threatened, vulnerable, endangered and critically endangered animals and plants.

Legislative Act	Brief Description
	▸ **Nature Conservation (Animals) Regulation 2020** has replaced the Nature Conservation Wildlife Regulation (2006) and introduces a new wildlife licensing framework but incorporates and streamlines existing provisions from the regulations that it replaces. In general, an animal authority under the Animals Regulation must not be granted where activities are likely to adversely affect conservation or ecological sustainability of native wildlife. The demerit points system for offences against the Act has been retained. There is now one overarching offence provision for breaching the conditions of an authority, with a higher offence for failure to comply with a record-keeping or return of operations condition. ▸ **Nature Conservation (Plants) Regulation 2020** transfers all existing plant provisions into a single stand-alone regulation that was contained in the previous Nature Conservation Wildlife Regulation (2006). The new Plants Regulation retains and streamlines many of the existing provisions in the administration and wildlife and wildlife management regulations. The allowances for taking protected plants, including under a conservation plan, an authority (such as a clearing permit) or an exemption, are retained in the plants regulation and there are no significant amendments to these provisions.
Queensland Fisheries Act 1994	The *Fisheries Act 1994* provides for the use, conservation and enhancement of the community's fisheries resources and fish habitat by providing for, amongst other things, the protection of fish habitats. This Act has been integrated into the *Planning Act 2016* so that development permits under the Planning Act are required for certain operational works that are assessable development. Operational works that are assessable development under the Planning Act include waterway barrier works and works in a declared fish habitat.
Biosecurity Act (2014)	The Queensland Government's *Biosecurity Act 2014* is administered by the Department of Agriculture and Fisheries (DAF). The Act provides management measures to protect agricultural and tourism industries and the environment from pests, diseases and contaminants. Under the Act, invasive plants and animals are categorised as either a 'Prohibited Matter' or a 'Restricted Matter' and replace the 'Declared' status under the Land Protection (Pest and Stock Route Management) Act 2002, which has been superseded.
Environmental Protection Act 1994	The *Environmental Protection Act 1994* (EP Act) provides the key legislative framework for environmental management and protection in Queensland. The EP Act utilises several mechanisms to achieve its objectives. Relevant to this project is the requirement for the establishment of a general environmental duty, under Section 319 of the EP Act. Section 319 of the EP Act places a general environmental duty on Douglas Shire Council to ensure that 'it does not carry out any activity that causes, or is likely to cause, environmental harm unless the person takes all reasonable and practicable measures to prevent or minimise the harm'. By undertaking the preparation of this detailed ecological investigation, Douglas Shire Council demonstrates that it is cognisant of the responsibilities for environmental protection and management in Queensland.

Legislative Act	Brief Description
Environmental Offsets Regulation 2014	Matters of State Environmental Significance (MSES) are referenced in the State interest under the State Planning Policy (SPP) and are mapped by the Queensland Government. The Environmental Offsets Regulation 2014 also prescribes MSES for the purposes of environmental offsets legislation in Queensland. Many of the MSES in the Regulation coincide with the MSES listed under the SPP, however, there are additional items listed under the Regulation that are not listed in the SPP. The MSES mapping includes certain environmental values that are protected under Queensland legislation such as State-managed conservation areas, marine parks, waterways and wetlands, protected habitat, fish habitat, regulated vegetation, connectivity areas and offset areas. MSES defined under the SPP and Environmental Offset Regulation 2014 include the following: ▸ protected areas (including all classes of protected area except coordinated conservation areas) under the NC Act ▸ marine parks and land within a 'marine national park', 'conservation park', 'scientific research', 'preservation' or 'buffer' zone under the Marine Parks Act 2004 ▸ marine plants areas within declared fish habitat areas that are management A areas or management B areas under the Fisheries Regulation 2008 ▸ waterways providing fish passage ▸ threatened wildlife under the NC Act and special least concern animals under the Nature Conservation (Animal) Regulation 2020 ▸ regulated vegetation under the Vegetation Management Act 1999 (VM Act) that is: o Category B areas on the regulated vegetation management map, that are Endangered or Of concern REs o Category C areas on the regulated vegetation management map that are Endangered or Of concern REs o Category R areas on the regulated vegetation management map o areas of essential habitat on the essential habitat map for wildlife prescribed as Endangered wildlife or Vulnerable wildlife under the NC Act o REs that intersect with watercourses identified on the vegetation management watercourse map o REs that intersect with wetlands identified on the vegetation management wetlands map o high preservation areas of wild river areas under the Wild Rivers Act 2005 o connectivity areas containing remnant vegetation Category B as depicted in the Environmental Offset Landscape Connectivity Assessment Tool o wetlands in a wetland protection area or wetlands of high ecological significance shown on the Map of Referable Wetlands under the Environmental Protection Regulation 2008 o wetlands and watercourses in high ecological value waters defined in the Environmental Protection (Water and Wetland Biodiversity) Policy 2019 ▸ Legally secured offset areas

Legislative Act	Brief Description
Water Act 2000	The purpose of the *Water Act 2000* is to provide for the sustainable management of water and other resources. Under Section 266 of the *Water Act 2000*, a riverine protection permit is generally required from the DNRW to: ▸ Destroy vegetation in a watercourse ▸ Excavate in a watercourse ▸ Place fill in a watercourse Additionally, water supply for construction purposes (e.g., access track construction/compaction, dust suppression etc.) may be required. Where this water supply is proposed to be sourced from nearby watercourses, a permit in accordance with Section 237 of the *Water Act 2000* will be required from DNRM prior to any water being extracted from the watercourse.

1.4 Weed Management Legislation

Weed species can interrupt natural landscape function and may lead to significant economic impacts. Weeds are managed by being declared under one (1) or all the three (3) relevant legislation and/or local laws outlined below.

1.4.1 Weeds of National Significance

The Australian state and territory governments have compiled a list of invasive plant species (Weeds of National Significance – WoNS) based on an assessment process that prioritises these weeds based on their invasiveness, potential for spread and environmental, social, and economic impacts. Consideration is also given to their ability to be successfully managed. A list of 20 WoNS was endorsed in 1999 and a further 12 were added in 2012.

1.4.2 Biosecurity Act 2014 (Queensland)

1.4.2.1 Prohibited Invasive Plant

Prohibited matters include a range of invasive plants and invasive animals and other types of pests and diseases listed in the Act. These plants have the potential to cause significant impacts and are currently not present or known to be present in Queensland. It is an offence to deal with a prohibited matter or fail to report its presence.

1.4.2.2 Restricted Invasive Plants

These species are established in Queensland and seriously threaten Queensland's primary industries, natural environment, livestock, human health, and people's livelihoods. Under the *Biosecurity Act 2014*, there are 7 categories of restricted matter (i.e. restricted matter may include matters such as plants, animal diseases, noxious fish, insects, and other pest animals). Restricted invasive plants may fall into one (1), a combination of, or all the five (5) priority categories (listed below). Under each, the restricted invasive plant has listed restrictions. The specific restriction requirements also apply to a person when dealing with restricted invasive plants unless they have a restricted matter permit.

Restricted invasive plant categories and restrictions:

- Category 1: relates to biosecurity matters other than plants
- Category 2: the invasive plant must be reported within 24 hours Biosecurity Queensland on 13 25 23
- Category 3: the invasive plant must not be distributed either by sale or gift or released into the environment
- Category 4: the invasive plant must not be moved
- Category 5: the invasive plant must not be kept.

All landowners have a general biosecurity obligation (GBO) under the *Biosecurity Act 2014 to* take reasonable and practical steps to minimise the risks associated with invasive plants and animals under their control *regardless of category status.* Weeds that are not listed under the *Biosecurity Act 2014* may still be declared at the local government level within a local government area (LGA).

1.4.3 Douglas Shire Biosecurity Plan (2022-2026)

The purpose of the Douglas Shire Biosecurity Plan (DSBP) is to bring together all sectors of the local community to manage invasive plants and animals. It does this by outlining the key responsibilities, roles and desired outcomes required under the *Biosecurity Act 2014* for the whole of the Douglas Shire LGA. In doing so it aims to benefit the community through preventing or reducing the impacts of pests and weeds on the economy, environment, and people of an area, through:

- Addressing the obligations under the Biosecurity Act 2014 for all stakeholders
- Prioritization of invasive pests and prevention of the introduction and spread of invasive plants and animals within Douglas Shire based on best practice
- Identifying the roles and responsibilities of all stakeholders involved and providing direction on managing biosecurity risks
- Building partnerships and enabling better use of resources available within the community and across all land managers
- Better coordination between all stakeholders, including integrated catchment management approaches, state-wide land protection strategies and management of conservation areas.

The Douglas Shire LGA priority weeds, WoNS and declared weeds (*Biosecurity Act 2014*) occurring within or near the project site are listed in **Section 4.4** below.

2.0 Methodology

2.1 Desktop review

4 Elements Consulting completed a review of relevant mapping, databases, legislation and associated plans and policies to identify potential matters of ecological significance (MSES, MNES and/or MLES). These include listed threatened species and vegetation communities, and other ecological features that may occur on or within proximity of the Daintree Ferry Terminal. This review included an assessment of the following:

- Wildlife Online database of flora and fauna (DES 2024a). This database holds records of plants and animals that have either been sighted or collected within a given radius of the property (a search parameter was prescribed limiting the search area to a 10 km radius around the property. The records held in this database are maintained by DES.
- Protected Matters database of MNES (DCCEEW 2024). This database applies a range of bio-models to predict the presence of species of flora and fauna and other MNES within a given radius of the property (a search parameter was prescribed limiting the search area to a 5 km radius) as cited under the Commonwealth's EPBC Act.
- Protected Matters database of MSES (DES 2024b). This database applies a range of bio-models to predict the presence of species of vegetation and other MSES within a given radius of the property (a search parameter was prescribed limiting the search area to 10 km).
- Review of relevant legislation and associated plans and policies, including but not limited to the Queensland Government NC Act, VM Act, Planning Act, Environmental Protection Act, Water Act, and the Australian Government EPBC Act.
- Literature review. A range of scientific papers, recovery and conservation plans and other ecological assessment and literature were reviewed for several related matters (such as targeted threatened species).
- Digital mapping on Queensland Globe to determine vegetation communities within and surrounding the property, and to review the extent of historical clearing and land use, and any other significant environmental features such as watercourses and wetlands.
- Australian Virtual Herbarium (for voucher notes and distribution records of threatened flora species).

2.2 Field Survey Methodology

2.2.1 General Field Survey

The field survey for the completion of this report was carried out by 4 Elements Consulting senior ecologist Ryan Hughes over two (2) consecutive days between 13 - 14 March 2023. An update to the survey was additionally undertaken with senior ecologists Dr Mark Runkovski and Ryan Hughes between 8 – 9 July 2024.

The purpose was to assess the ecological condition of the project site and provide information on the following:

- Presence/absence of suitable habitat for threatened flora and fauna species

- Condition and disturbance history of habitat
- Location of site within known distribution of threatened species
- Connectivity assessment with habitat where threatened species have potential or are known to occur
- Structural and floristic characteristics of the vegetation
- Soil type/structure and dominant landform description (visual only)
- Presence of water in any form e.g., rivers, dams, creeks, drainage lines, soaks
- Size and abundance of hollows and coarse woody debris (CWD)
- Presence of sandbanks, shallow wading areas, rock walls, saltmarsh, roost areas, etc; and
- Presence of mistletoe, nectar, gum, seed, sap sources, browse trees

2.2.1.1 Threatened Flora Searches

One (1) timed meander (~ 9 hours) was conducted at both the north and south approach of the Daintree River Ferry by suitably qualified person Ryan Hughes between 13 - 14 March 2023. As this survey has a currency of 12 months, an updated survey was undertaken matching the original survey. This was undertaken by suitably qualified people senior ecologists Dr Mark Runkovski and Ryan Hughes between 8 – 9 July 2024. A 100 m radius of each of the planned vegetation clearance areas was searched.

The survey effort undertaken met the methodology required under the Flora Survey Guidelines – Protected Plants (DES 2022). During timed meanders, the time is recorded approximately every 5 minutes while conducting a search for threatened or near threatened plants. If no threatened or near threatened species are recorded, the search continues for 30 minutes or until the entire area is surveyed, whichever happens sooner. If threatened or near threatened species are recorded the search must continue for at least 30 min after the last plant is recorded or until the entire area is surveyed, whichever happens sooner (**Figure 4**).

All vascular plant species observed in this meander survey were recorded to compile a list of all species detected (see **Table 3**). For species that could not be identified confidently in the field, a voucher specimen was collected and used for later identification. No specimens were required to be sent to the Queensland Herbarium for verification.

2.2.1.2 Regional Ecosystem verification

Delineation of regional ecosystem distributions across the project was achieved using quaternary level assessments, or rapid plots, as per the QBEIS methodology v 7.0 (Neldner et al 2023). These assessments are designed to capture information quickly targeting soil and landform and key species within each vegetation structural layer. This information is generally sufficient to determine the identity of a regional ecosystem. This then allows the confirmation or alteration of regional ecosystem polygon boundaries when mapping vegetation communities across the project site. A total of eight (8) quaternary surveys were undertaken throughout the project site (**Figure 4**).

2.2.1.3 Weed Assessment

Weeds were identified during the field survey. These records were GPS located and notes on infestation size and ecological impacts noted. Any legislative requirement for management of weed species are addressed in **Section 4.** below.

Results of the field survey are provided in **Section 4.4**.

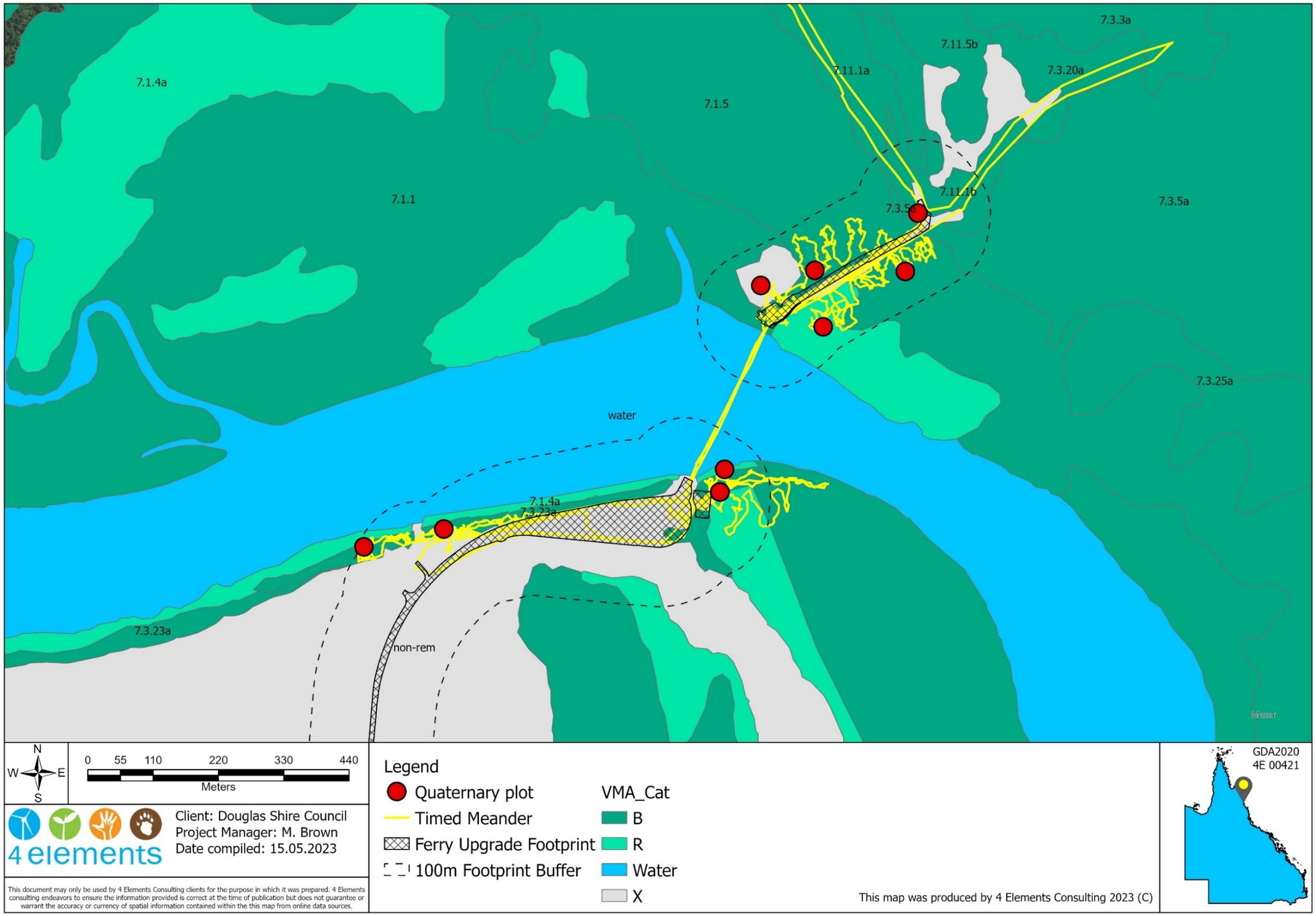


Figure 4. Quaternary plot survey locations and site traverse

3.0 Desktop Analysis Results

3.1 EPBC and NCA Database Search

Desktop searches were made of the EPBC Act 1999 Protected Matters (Protected Matters Search Tool - PMST) database and the NC Act 1992 Environmental Reports (WildNET) online:

- PMST Database Results (**Appendix A**)
- Wildlife Online (WildNET) (**Appendix B**)
- Matters of State Environmental Significance (**Appendix C**)
- Regulated Vegetation Mapping (**Appendix D)**
- Potential Occurrence Assessment (**Appendix E**)

3.2 EPBC Act Protected Matters Search Tool

A 10 km radius from a central point within the property was applied in the search tool to identify the locality. Searches of the EPBC Act Protected Matters Search Tool returned records of 76 threatened species potentially occurring within the locality. This included 14 birds, 12 mammals, 7 reptiles, 5 cartilaginous sharks, 1 ray finned fish, 7 frogs and 30 plants. The complete online search results are provided in **Appendix A**.

3.3 NC Act Wildlife Online

The NC Act Wildlife Online database search was based on a 10 km radius from a central point within the property. The search returned a total of records of 38 threatened species within the locality. This included 7 frogs, 9 birds, 2 mammals, 2 ray finned fish, 1 reptile and 60 plants that may potentially occur within the locality. The complete online search results are provided in **Appendix B**.

3.4 Combined Potential Occurrence

Condensed results which summarise the results of all search outputs are combined in **Table 2** and identify that 78 flora and 48 fauna which are endangered, vulnerable or near threatened (EVNT) species which have potential to occur within or near the proposed site.

Appendix E assesses the risk of EVNT species known to occur within the locality and their potential of occurring on the project site. This risk was considered after the property assessment was completed.

Table 2. Potentially occurring threatened species (EPBC Act and NC Act)

Common Name	Scientific Name	Status	Status
		EPBC Act	NC Act
Threatened Fauna			
Birds			
Red Knot, Knot	*Calidris canutus*	E	E
Curlew Sandpiper	*Calidris ferruginea*	CR	E
Southern Cassowary	*Casuarius casuarius* subsp. *johnsonii*	E	E
Greater Sand Plover	*Charadrius leschenaultii*	V	V
Lesser Sand Plover	*Charadrius mongolus*	E	E
Macleay's fig-parrot	*Cyclopsitta diophthlama* subsp. *macleayana*	-	V
Red Goshawk	*Erythrotriorchis radiatus*	V	E
Beach-stone curlew	*Esacus maginostris*	-	V
White-bellied Storm-Petrel	*Fregetta grallaria grallaria*	V	LC
White-throated Needletail	*Hirundapus caudacutus*	V	V
Bar-tailed Godwit	*Limosa lapponica* subsp. *baueri*	V	V
Eastern Curlew	*Numenius madagascariensis*	CR	E
Australian Painted Snipe	*Rostratula australis*	E	V
Australian Fairy Tern	*Sternula nereis nereis*	Ma	V
Buff-breasted Button-quail	*Turnix olivii*	E	E
Northern Masked Owl	*Tyto novaehollandiae* subsp. *kimberli*	V	V
Frogs			
Tapping Nursery Frog	*Cophixalus aenigma*	EX	PE
Elegant Frog	*Cophixalus concinnus*	CR	V
Australian Lace-lid	*Litoria dayi*	V	E
Armoured Mistfrog	*Litoria lorica*	CR	CR
Waterfall Frog	*Litoria nannotis*	E	E
Mountain Mistfrog	*Litoria nyakalensis*	CR	CR
Common Mistfrog	*Litoria rheocola*	-	E
Tapping Green-eyed Tree-frog	*Litoria serrata*	-	V
Sharp-snouted Day Frog	*Taudactylus acutirostris*	Ex	Ex
Northern Tinker Frog	*Taudactylus rheophilus*	CR	CR

Common Name	Scientific Name	Status	Status
		EPBC Act	NC Act
Fish			
Orange Cling Goby	*Stiphodon rutilaureus*	CR	-
Opal Cling Goby	*Stiphodon semoni*	CR	-
Sharks			
Great White Shark	*Carcharodon carcharias*	V	-
Freshwater Sawfish	*Pristis pristis*	V	-
Green Sawfish	*Pristis zjisron*	V	-
Great White Shark	*Carcharodon carcharias*	V	-
Whale Shark	*Rhincodon typus*	V	-
Mammals			
Blue Whale	*Balaenoptera musculus*	E	LC
Northern Quoll	*Dasyurus hallucatus*	E	LC
Spotted-tailed Quoll	*Dasyurus maculatus* subsp. *gracilis*	E	E
Bennett's Tree-kangaroo	*Dendrolagus bennettianus*	-	NT
Semon's Leaf-nosed Bat	*Hipposideros semoni*	V	E
Ghost Bat	*Macroderma gigas*	V	E
Black-footed Tree-rat	*Mesembriomys gouldii* subsp. *rattoides*	V	LC
Koala	*Phascolarctos cinereus* (combined populations of QLD, NSW, and the ACT)	V	V
Northern Greater Glider	*Petauroides minor*	V	V
Spectacled Flying-fox	*Pteropus conspicillatus*	E	V
Large-eared Horseshoe Bat	*Rhinolophus robertsi*	V	V
Bare-rumped Sheath-tailed Bat	*Saccolaimus saccolaimus* subsp. *nudicluniatus*	V	E
Water Mouse	*Xeromys myoides*	V	V
Reptiles			
Yakka Skink	*Egernia rugosa*	V	V
Salt-water Crocodile	*Crocodylus porosus*	Mi	V
Threatened Flora			
Pale Chandelier Orchid	*Acriopsis emarginata*	V	V
	Acronychia acuminata	-	NT

Common Name	Scientific Name	Status	Status
		EPBC Act	NC Act
	Actephila foetida	V	V
Jewel Orchid	*Anoectochilus yatesiae*	-	NT
	Argophyllum cryptophlebum	-	V
	Archidendron kainsii	-	V
Hairy-joint Grass	*Arthraxon hispidus*	V	V
	Austromuellera trinervia	-	NT
	Beilschmiedia castrisinensis	-	NT
	Bubbia queenslandica subsp. queenslandica	-	NT
	Bubbia whiteana	-	V
	Buchanania mangoides	-	V
	Buckinghamia ferruginiflora	-	V
Haines's Orange Mangrove	*Bruguiera x hainesii*	CR	CR
	Canarium acutifolium	V	V
	Ceratopetalum macrophyllum		NT
	Ceratopetalum corymbosum	-	V
	Cheilocostus potierae	-	E
	Citrus inodora	-	V
	Chingia australis	E	E
	Cyclophyllum costatum	V	V
	Demorchis queenslandica	V	V
Chocolate Tea Tree Orchid	*Dendrobium johannis*	V	V
Dark-stemmed Antler Orchid	*Dendrobium mirbelianum*	E	E
	Dendrobium nindii	E	E
	Dioclea hexandra	-	V
	Dissiliaria tuckeri	-	V
	Drosera prolifera	V	V
	Endiandra cooperana	E	E
	Endiandra grayi	-	V
	Endiandra micronuera	-	NT
	Freycinetia marginata	-	V
	Freycinetia percocosta	-	V

Common Name	Scientific Name	Status	Status
		EPBC Act	NC Act
	Gardenia actinocarpa	-	
	Gymnostoma australianum	-	V
	Hedyotis novoguineensis	-	E
Yellow Siris	*Heliodendron xanthoxylon*	-	NT
	Hymenasplenium wildii	V	V
	Isachne sharpii	-	E
	Kayea larnachiana	-	V
	Lindsaea terrae-reginae	-	E
	Linospadix palmerianus	-	NT
	Megahertzia amplexicaulis	-	NT
Ant Plant	*Myrmecodia beccarii*	V	V
	Mischocarpus albescens	-	NT
	Mitrantia bilocularis	-	E
	Neostrearia fleckeri	-	NT
	Paramapania parvibractea	-	V
Forest Swamp Orchid	*Phaius pictus*	V	V
Native Moth Orchid	*Phalaenopsis amabilis subsp. rosenstromii*	E	E
	Phaleria biflora	V	V
BlueTassel-fern	*Phlegmariurus dalhousieanus*	E	CR
Layered Tassel Fern	*Phlegmariurus phlegmarioides*	-	V
Rock-tassel Fern	*Phlegmariurus squarrosus*	CR	CR
	Phyllanthus brassii	-	V
Middle Filmy Fern	*Polyphlebium endlicherianum*	E	V
	Polyscias bellendenkerensis	V	V
Daintree Gardenia	*Randia audasii*	-	NT
	Ristantia gouldii	V	V
	Rhodamnia sessiliflora	-	E
	Rhodomyrtus effusa	-	E
	Rhodomyrtus pervagata	-	E
	Ryparosa kurrangii	-	NT
	Sarcopteryx montana	-	NT
	Samadera baileyana	-	NT

Common Name	Scientific Name	Status	Status
		EPBC Act	NC Act
Tully Penda	*Sphaerantia discolor*	-	V
	Stenocarpus cryptocarpus	-	NT
Fern-leaved Stenocarpus	*Stenocarpus davallioides*	-	V
	Strongylodon lucidus	-	NT
	Trachymene geraniifolia	-	NT
	Tristellateia australasiae	-	NT
Thin Feather Orchid	*Tropilis callitrophilis*	V	V
Cooktown Orchid	*Vappodes phalaenopsis*	V	V
	Vrydagzynea grayi	E	E
	Wilkiea sp. (McDowall Range J. G. Tracey 14552)	-	NT
	Whyanbeelia terra-reginae	-	NT
	Xanthophyllum fragrans	-	NT
	Xanthostemon formosus	E	E
Velvet Jewel Orchid	*Zeuxine polygonoides*	V	V

Key: Ex: Extinct, PE: Probably Extinct, CR: Critically Endangered; E: Endangered; V: Vulnerable; NT: Near Threatened; Ma: Marine

3.5 EPBC Act and MNES Search tool (Places of Environmental Significance)

Matters of National Environmental Significance (MNES) are matters pursuant to the EPBC Act 1999. The results of the MNES search, which provide details on environmentally significant areas and habitat types, are provided in **Table 3** below. To conduct this search tool, a 10-kilometre radius buffer was added around a central point in the project site. This provides results for all possible MNES matters that may occur on the property.

Table 3. PMST results (significant places)

Category	Result
Matters of National Environmental Significance	
World Heritage Properties	2
National Heritage Places	3
Wetlands of International Importance	None
Great Barrier Reef Marine Park	4
Commonwealth Marine Area	3

Category	Result
Listed Threatened Ecological Communities	3
Listed Threatened Species	76
Listed Migratory Species	50
Other Matters Protected by the EPBC Act	
Commonwealth Land	None
Commonwealth Heritage Places	None
Listed Marine Species	100
Whales and other cetaceans	12
Critical Habitats (Marine Turtles)	None
Commonwealth Reserves Terrestrial	None
Commonwealth Reserves Marine	None
Nationally Important Wetlands	4

3.6 Migratory and Marine species

A total of 50 migratory and/or marine listed under the EPBC Act 1999 were identified in the PMST report. A summarised list of these species is provided in **Table 4** below. **Appendix E** provides the potential occurrence assessment results for each species listed under the PMST.

Table 4. Migratory species

Common name	Species Name	EPBC Act Status	NCA Act status
Common Noddy	*Anous stolidus*	Mi, Ma	SL
Satin Flycatcher	*Myiagra cyanoleuca*	Mi, Ma	SL
Rufous Fantail	*Rhipidura rufifrons*	Mi, Ma	E
Spectacled Monarch	*Symposiachrus trivirgatus*	Mi, Ma	SL
Oriental Cuckoo	*Cuculus optatus*	Mi	E
Barn Swallow	*Hirundo rustica*	Mi, Ma	SL
Osprey	*Pandion haliaetus*	Mi, Ma	SL
Fork-tailed Swift	*Apus pacificus*	Mi, Ma	CR
Little Tern	*Sternula albifrons*	Mi, Ma	V
White-throated Needletail	*Hirundapus caudacutus*	Mi, Ma	E
Yellow Wagtail	*Motacilla flava*	Mi, Ma	SL
Eastern Curlew	*Numenius madagascariensis*	Mi, Ma	SL
Bar-tailed Godwit	*Limosa lapponica*	Mi, Ma	SL

Common name	Species Name	EPBC Act Status	NCA Act status
Latham's Snipe	*Gallinago hardwickii*	Mi, Ma	SL
Asian Dowitcher	*Limnodromus semipalmatus*	Mi, Ma	SL
Black-faced Monarch	*Monarcha melanopsis*	Mi, Ma	SL
Black-winged Monarch	*Monarcha frater*	Mi, Ma	V
Great Frigatebird	*Fregata minor*	Mi, Ma	V
White-tailed Tropicbird	*Phaethon lepturus*	Mi, Ma	SL
Lesser Frigatebird	*Fregata ariel*	Mi, Ma	E
Red-rumped Swallow	*Cecropis daurica*	Mi, Ma	SL
Greater Sand Plover	*Charadrius leschenaultii*	Mi, Ma	SL
Sharp-tailed Sandpiper	*Calidris acuminata*	Mi, Ma	SL
Common Greenshank	*Tringa nebularia*	Mi, Ma	SL
Common Sandpiper	*Actitis hypoleucos*	Mi, Ma	SL
Pectoral Sandpiper	*Calidris melanotos*	Mi, Ma	SL
Red Knot	*Calidris canutus*	Mi, Ma	SL
Curlew Sandpiper	*Calidris ferruginea*	Mi, Ma	SL
Australian Snubfin Dolphin	*Orcaella heinsohni*	Mi, Ma	V
Australian Humpback Dolphin	*Sousa sahulensis*	Mi, Ma	SL
Dugong	*Dugong dugon*	Mi, Ma	SL
Humpback Whale	*Megaptera novaeangliae*	Mi, Ma	SL
Blue Whale	*Balaenoptera musculus*	Mi, Ma	SL
Bryde's Whale	*Balaenoptera edeni*	Mi, Ma	SL
Killer Whale	*Orcinus orca*	Mi, Ma	SL
Green Turtle	*Chelonia mydas*	Mi, Ma	SL
Loggerhead Turtle	*Caretta caretta*	Mi, Ma	E
Leatherback Turtle	*Dermochelys coriacea*	Mi, Ma	V
Estuarine Crocodile	*Crocodylus porosus*	Mi, Ma	V
Hawksbill Turtle	*Eretmochelys imbricata*	Mi, Ma	E
Olive Ridley Turtle	*Lepidochelys olivacea*	Mi, Ma	-
Flatback Turtle	*Natator depressus*	Mi, Ma	-
Green Sawfish	*Pristis zijsron*	Mi, Ma	-
Freshwater Sawfish	*Pristis pristis*	Mi, Ma	-
Great White Shark	*Carcharodon carcharias*	Mi, Ma	-
Giant Manta Ray	*Mobula birostris*	Mi, Ma	-

Common name	Species Name	EPBC Act Status	NCA Act status
Whale Shark	*Rhincodon typus*	Mi, Ma	-
Oceanic Whitetip Shark	*Carcharhinus longimanus*	Mi, Ma	-
Narrow Sawfish	*Anoxypristis cuspidata*	Mi, Ma	-
Reef Manta Ray	*Mobula alfredi*	Mi, Ma	-

Key: Mi: Migratory, Ma: Marine, Ex: extinct, CR/CE: Critically Endangered; E: Endangered; V: Vulnerable; NT: Near Threatened, SL: Special Least Concern

3.7 Essential Habitat

Regulated vegetation (essential habitat) occurs within portions of the project site for the following species:

- Estuarine Crocodile (Vulnerable)
- Southern Cassowary (Endangered)
- Macleay's Fig Parrot (Vulnerable)
- Spectacled Flying Fox (Endangered)
- Diadem Leaf-nosed Bat (Endangered)
- *Acronychia acuminata*
- *Isachne sharpii*

For the essential habitat mapping output, see **Figure 11**.

3.8 Protected Plant Trigger Area

All remnant vegetation within the project site is located within the high risk -protected plant trigger area. A protected plant survey as per the Flora Survey Guidelines - Protected Plants was undertaken with the result outline in the below **Section 4.0**.

For the Protected Plant Trigger mapping output see **Appendix H**.

3.9 Ground Water-dependent ecosystems

Riverine groundwater dependent ecosystems are riverine wetlands which require access to groundwater on a permanent or intermittent basis to meet all or some of their water requirements to maintain their communities of plants and animals, ecological processes, and ecosystem services.

No groundwater dependent ecosystems, streams or springs are mapped within the property.

4.0 Flora survey results

4.1 Vegetation communities

The vegetation assessments focused on ground truthing RE mapping within the project site and correcting mapping where necessary from REDD version 13. All vegetation within the direct clearing alignment will be assessed for potential offsetting by the Qld Department of Resources under the legally applicable current REDD v13.0 mapping only. The purpose of ground truthing the vegetation communities within the project site is not to override the regulated vegetation mapping. Ground truthing will however identify potential threatened species habitat listed under the EPBC act 1999 or the NC act 1992 critical to assessing the impact assessment section of the proposal (see **Section 6.0**).

This process resulted in several changes (see **Table 5** below). A single mapped RE was not recorded during ground truthing, and all other REs listed in the REDD mapping were present as mapped. The single RE not observed, listed as Of Concern, was RE 7.3.25a. It was not recorded during the field survey and instead the polygon was verified as Of Concern RE 7.1.4a (**Table 5**). The ground verified RE polygons for the entire project site are visually represented in **Table 4 and Figure 4**. The regulated vegetation management class map is provided in **Figure 7** below.

- No VM Act 1999 status changes were recorded within the project site
- A single regional ecosystem was listed as Endangered under the VM Act 1999 (RE 7.3.23a)
- Two regional ecosystems were listed as Of Concern under the VM act 1999 (RE 7.1.4a, RE 7.1.5)
- Two regional ecosystems were listed Least Concern under the VM act 1999 (RE 7.1.1, RE 7.3.5)

Table 5. Project site mapped RE descriptions

RE & Biodiversity Status	Description (REDD version 13)	Location	Site Value
Wet Tropics Bioregion – Land Zone 1 – Estuarine Sediments			
RE 7.1.1 LC/NCAP	Mangrove closed scrub to open forest. Sheltered coastlines, estuaries, and deep swales between dunes, on fine anaerobic silts, inundated with saline water at high tide.	The northern side of the Daintree River on both the east and west side of Cape Tribulation Road	Important fish nursery areas. Threatened species include: *Myrmecodia beccarii* (ant plant) and *Hypochrysops apollo* subsp. *apollo* (apollo jewel butterfly). Pre-clear extent = 47 000 ha; 2021 extent = 45 000 ha

RE & Biodiversity Status	Description (REDD version 13)	Location	Site Value
RE 7.1.4a OC/E	Mesophyll vine forest/mangrove complex. Canopy species include *Heritiera littoralis, Bruguiera gymnorhiza, Sonneratia alba, Barringtonia racemosa, Archontophoenix alexandrae, Elaeocarpus grandis, Melicope elleryana, Acacia mangium* and *Syzygium tierneyanum*. Inland margins of mangroves and estuaries. Intertidal.	Located along the both the northern and southern banks of the Daintree River	Habitat for threatened epiphyte species (e.g., epiphytic tassel ferns and orchids). Pre-clear extent = 300 ha; 2021 extent = 200 ha
RE 7.1.5 OC/OC	*Melaleuca viridiflora* (broad leaf tea-tree) or *Melaleuca* spp. +/- *Acacia* spp. +/- mangrove spp. open woodland to open forest and shrubland. Plains adjacent to mangroves.	Located on the northern side of the Daintree River on the western side of Cape Tribulation Road	Habitat for threatened epiphyte species (e.g., epiphytic tassel ferns and orchids). Pre-clear extent = 400 ha; 2021 extent = 400 ha
Wet Tropics Bioregion – Land Zone 3 – Loamy Alluvia			
RE 7.3.5 LC/E	*Melaleuca quinquenervia* open forest, woodland and shrubland. Lowlands of the very wet and wet rainfall zone, on poorly drained peaty humic gley soils where the water table is near or above the ground for most of the year. Palustrine.	Located on the corner of Cape Tribulation Road and Forest Creek Road on the northern side of the Daintree River	This regional ecosystem plays a critical role in the hydrological regime of the coastal plain. Pre-clear extent = 25 000 ha; 2021 extent = 11 000 ha
RE 7.3.23a E/E	Simple-complex semi-deciduous notophyll to mesophyll vine forest. Lowlands on alluvium, predominantly riverine levees, of the moist and dry rainfall zones. Riverine.	Located along the Southern Bank of the Daintree River	Suitable habitat for *Randia audasii, Rhodomyrtus effusa* and *Rhodamnia sessiliflora.* Pre-clear extent = 15 000 ha; 2021 extent = 4 000 ha

RE & Biodiversity Status	Description (REDD version 13)	Location	Site Value
RE 7.3.25a OC/OC	*Melaleuca leucadendra* open forest and woodland. Stream levees and prior streams on well-drained sandy clay loam alluvial soils. Riverine.	**Not present** within the project alignment	Important wildlife corridors in cleared landscapes. Pre-clear extent = 8 000 ha; 2021 extent = 5 000 ha
RE 7.11.1b LC/NCAP	Mesophyll vine forest recovering from disturbance, with *Acacia* spp. canopy or emergents. Lowlands and foothills on metamorphics, of the very wet and wet rainfall zones. Not a Wetland.	Located north of the corner of Cape Tribulation Road and Forest Creek Road on the northern side of the Daintree River	Suitable habitat for numerous threated plant species. Pre-clear extent = 146,000 ha; 2021 extent = 130,000 ha

Key: LC: Least Concern; NCAP: No Concern at Present; OC: Of Concern; E: Endangered

4.2 Vegetation communities

Of the seven (7) through desktop mapping, a total of five (5) REs were ground-truthed within the proposed alignment. They can broadly be separated based on tidal influence with three (3) REs having a strong tidal influence (mangrove communities) and two REs occurring just above regular tidal influence (complex vine forests/paperbark swamp). The vegetation communities identified during the field survey and the threatened species they provide habitat for, are described below.

4.2.1 Estuarine Communities

The distribution of the three (3) mangrove forest communities present within the clearance impact area were dependent on varying levels of tidal influence. Each community is described below from highest to lowest tidal influence.

Regional Ecosystem 7.1.1 (see **Plate 1, Figure 5** and **Figure 6** below) was located below the high tide which receives frequent tidal inundation. This only permits establishment of vegetation that is highly salt tolerant. The closed canopy layer consisted of *Bruguiera gymnorhiza* and *B. sexangula* at a height of 5-8m. An open understory consisted of *Bruguiera* spp., *Lumnitzera racemosa, Xylocarpus graniticum* and *Rhizophora stylosa*. A low and sparse shrub layer 0.5-1m in height consisted of *Acrostichum speciosum* and juvenile canopy species. Epiphytes were abundant with the NC Act 1992 and EPBC Act 1999 Vulnerable listed Ant Plant (*Myrmecodia beccarii*) being

the most common species. Two additional NC Act 1992 and EPBC Act 1999 listed orchid species were recorded with *Acriopsis emarginata* (Vulnerable) and *Dendrobium nindii* (Endangered) within the vegetation community. Due to regular tidal inundation leaf litter and coarse woody debris was limited as leaves are carried on tidal movements.

Plate 1. Regional Ecosystem 7.1.1 within the clearance impact area



A second distinct mangrove community was also present within the clearing impact area for the project. This was RE 7.1.4a (see **Plate 2**, **Figure 5** and **Figure 6** below). This vegetation community is listed as Of Concern under the *Vegetation Management act 1999*. This community was slightly elevated occurring on upper limit of saline influence. An open to closed canopy consisted of *Heritiera littoralis*, *Xylocarpus granatum* and *Bruguiera* spp. to a height of 5-10m. An open understory 1.5- 3m in height comprised *Cynometra iripa* and juvenile canopy species. Leaf litter and accumulation was limited due to tidal inundation. Many canopy trees had well developed root buttressing. Epiphytes were abundant with the NC Act 1992 and EPBC Act 1999 Vulnerable listed Ant Plant (*Myrmecodia beccarii*) being the most common species with *Dendrobium nindii* NC Act 1992 and EPBC Act 1999 Endangered also relatively common.

Plate 2. Regional Ecosystem 7.1.4a within the clearance impact area



A third mangrove community (RE 7.1.5) was located to the northwest of Cape Tribulation Road on the northern bank of the Daintree River (see **Plate 3, Figure 5**, and **Figure 6** below). It is likely that Cape Tribulation Road acts as a barrier to tidal inundation which allows for the increased influence of freshwater to permit the establishment of *Melaleuca* spp. This community occurred on a poorly draining site where the water table is close to or above the ground surface. Here tall, closed forest to 20 m in height comprised *Bruguiera* spp., *Rhizophora* spp., *Heritiera littoralis* and *Melaleuca quinquenervia*. The understory development consisted of juvenile canopy species with a sparse ground layer of *Acrostichum speciosum*. Epiphytes were present although not abundant. The Golden Orchid *Dendrobium discolor* was occasionally present. The Ant Plant (*Myrmecodia beccarii*) listed Vulnerable under the NC Act 1992 and the EPBC Act 1999 was present in very low numbers compared to the communities with a higher level of tidal inundation. The tall dense canopy shades the larger and more stable branches where the Ant Plant generally establishes. This vegetation structure likely explains the relative absence of this species within this community. A well-developed leaf litter and coarse woody debris was present due a reduced tidal inundation of this community.

Plate 3. Regional Ecosystem 7.1.5 within the clearance impact area



4.2.2 Non-estuarine Communities

Two (2) vegetation communities were located at an elevation that excludes the influence of tidal inundation. Within these areas a more structurally diverse and species rich vegetation community was present. These communities are described below.

Regional Ecosystem 7.3.5 was restricted to the northern side of the project site (see **Plate 4** and **Figure 5** below). This was a community that is influenced by near continual freshwater inundation which had an open forest structure to 20 m in height of *Melaleuca quinquenervia, M. leucadendra* and *M. cajuputi*. A diverse complex vine forest understory to 3- 12 m was present which comprised *Carallia brachiata, Ficus variegata, Macaranga tanarius* and *Cyclophyllum* sp. The climbing fern *Stenochlaena palustris* covered many of the lower trunks of *Melaleuca* spp. canopy trees. No protected plants were recorded within the clearance impact area within this vegetation community.

Plate 4. Regional Ecosystem 7.3.5a within the clearance impact area



Regional Ecosystem 7.3.23 was restricted to a narrow band <20m wide on the southern bank of the Daintree River (see **Plate 5** and **Figure 6** below). This was the most structurally and floristically diverse community present within the project site. A dense closed canopy comprised of *Syzygium monospermum, Acacia celsa, Elaeocarpus grandis, Aleurites rockinghamensis* and *Terminalia* sp. reached a height of 16-18m. A dense understory 6-10 m in height comprised *Mallotus philippensis, Alstonia muelleriana, Atractocarpus fitzalanii* and *Myristica globosa*. A sparse shrub layer was predominantly comprised of canopy and understory species. The NC Act 1992 Endangered listed understory tree *Rhodamnia sessiliflora* was commonly recorded within this vegetation community.

Plate 5. Regional Ecosystem 7.3.23 within the clearance impact area



4.3 Project site threatened flora

The timed meander surveys recorded six (6) EVNT flora species within the project alignment and associated 100 m buffer (clearance impact area) (see **Figure 5** and **Figure 6**). No additional threatened flora species to those recorded during the survey are considered likely to occur based on the potential occurrence assessment provided in **Appendix B**. A single species, *Randia audasii* (listed as Near Threatened pursuant to the NC Act 1992), was recorded within a cultivated garden within a non-remnant vegetation area and as a result is deemed to meet the definition of "not in the wild". Therefore, this species has not been assessed further. All other threatened flora recorded are "in the wild" and are detailed below. A full species list of all observed flora (251 species) is presented in **Appendix I**.

4.3.1 Ant Plant – *Myrmecodia beccarii* (Vulnerable EPBC 1999 and NC Acts 1992)

The Ant Plant, *Myrmecodia beccarii*, was frequently recorded on the northern side of the Daintree River. This plant is a member of the Rubiaceae family. It has a narrow distribution within the wet tropics being restricted to the coastal woodlands and mangrove communities between Ingham and Cooktown (AVH 2023).

Myrmecodia beccarii is a tuberous epiphyte which can reach a diameter up to 30 cm (DCCEEW 2008). The outside of the tuber is pale brown to grey with small spines borne on mounds. On mature plants, internal chambers form inside the tuber with smooth entrances where the Golden Ant (*Iridiomyrmex cordatus*) and the Apollo Jewel Butterfly (*Hypochrysops apollo apollo*) enter the plant forming a mutually beneficial relationship with the host plant. Stems emerge unbranched from the tuber of the plant where succulent elliptic to oblanceolate leaves to 9cm in length are oppositely arranged. Small white flowers (1cm in length) are pollinated to produce white fleshy fruits containing numerous seeds that are dispersed by birds and readily germinate when deposited on the branches of rough-barked trees such as *Melaleuca* spp.

Within the project site, *Myrmecodia beccarii* was recorded exclusively in the northern side of the Daintree River, in all three (3) mangrove communities (see **Figure 7** & **Plate 6** below). The highest abundance was immediately to the southeast of Cape Tribulation Road where a total of 567 individuals were recorded within the CIA. Some mature *Bruguiera* spp. and *Heritiera littoralis* trees were recorded with more than 10 individual plants per tree. The population had a diverse age structure with recently germinated plants and mature flowering plants commonly encountered (see **Plate 6** below). This species was much more abundant where the canopy layer comprised a more open structure. This allowed for a higher light level on the rigid lower branches and trunks of host trees. Where the mangrove canopy had a closed structure, west of Cape Tribulation Road, only the upper smaller tree limbs had high light exposure. These limbs move readily in the wind which likely prevents or reduces establishment of this species. The mangrove communities east of Cape Tribulation Road provided the most suitable vegetation structure and therefore contained nearly all individuals recorded.

Plate 6. *Myrmecodia beccarii* mature plant (left) and juvenile plants (right) growing on mature *Bruguiera* sp. within the CIA



4.3.2 Iron Malletwood – *Rhodamnia sessiliflora* (Endangered NC Act 1992)

During the field survey *Rhodamnia sessiliflora* (Iron Malletwood) was recorded within 100 m of the proposed clearing alignment (see **Plate 7** below). There is no current EPBC Act 1999 listing for this species, but it is listed as Endangered under the NC Act. This species is a wet tropics-endemic, restricted to the coastal ranges between Rossville and Paluma (AVH 2022). Within this range *R. sessiliflora* is widespread occurring on a variety of soil types within the lower structural layer of well-developed vine forest communities between sea level and 1000m asl (Zich et al. 2022). It is an understory tree within the Myrtaceae family to a height of 10 m. It is distinguished by its distinctive three veined leaves which are clothed in dense white hairs when developing (Snow 2007). The bark is red brown in colour and peels off the trunk in long fibrous strips. When flowers are present, they are stalkless (sessile) which is another key distinguishing feature of this species. This species is commonly recorded in naturally disturbed areas within vine forest communities such as along watercourses in near canopy gaps and edges. This species also occurs occasionally within wet sclerophyll forest communities where a well-developed vine forest understory has developed.

Despite being relatively common and widespread within the region, this species is threatened primarily due to the impact of myrtle rust (*Austropuccinia psidii*). This infection is a recent introduction to Australia that impacts a high number of Myrtaceae species within moist forests. Myrtle rust impacts new season growth and flower and fruit material which reduces the ability of plants to grow and reproduce. Most specimens encountered in

the field are older plants that were present prior to the arrival of myrtle rust. Flowering, fruiting and recruitment of this species is uncommonly encountered since the introduction of myrtle rust. As mature plants in a population die, they may not be replaced at a sufficient rate to maintain the population, leading to extinction.

Within the project site, *R. sessiliflora* were all located along the Daintree River on the southern bank within a narrow strip of complex mesophyll vine forest RE 7.3.23 and on the northern bank in areas of RE 7.3.5a along Forest Creek Road. The total population within the CIA was 19 individual plants (**Figure 8**). The population contained a number of mature specimens of diameters close to 8 cm diameter at breast height (DBH) which is relatively large for this species. Several small plants were observed in the ground layer suggesting potential recruitment within the population. However, due to the suckering nature of this species in response to disturbance through wind and flood impact, it was difficult to determine if these plants had recently germinated or were suckering shoots from the roots of nearby mature plants. Myrtle rust infection was commonly recorded on most plants, however, evidence of impact from infection during the survey was relatively low. Many individuals had examples of new leaf material that had very minor, or no impact recorded at the time of survey (**Plate 7**).

Plate 7. Leaves of *Rhodamnia sessiliflora* on the project site with three-veined leaves in opposite pairs. Top surface leaf material (left) and underside leaf material (right)



4.3.3 *Rhodomyrtus effusa* (Endangered NC Act 1992)

During the field survey *Rhodomyrtus effusa* was recorded within 100m of the proposed clearing alignment (see **Plate 8** below). There is no EPBC Act 1999 listing currently for this species, but it is listed as Endangered under the NC Act. This species is a wet tropics-endemic restricted to disturbed or previously disturbed areas of lowland rainforest < 200m asl (Australian Tropical Rainforest Plants, 2024). It is an understory tree within the Myrtaceae family, but unusually it can also resemble a vine with a very poor and scraggly climbing habit. It is distinguished by its distinctive three veined leaves, the undersides of which are covered in long brown hairs (Australian Tropical Rainforest Plants, 2024). When flowers are present, they are produced singly on stalks of about 5-10 mm long. This species is often recorded in naturally disturbed areas within vine forest communities such as along watercourses in near canopy gaps and edges.

This species is threatened primarily due to the impact of myrtle rust (*Austropuccinia psidii*). This infection is a recent introduction to Australia that impacts a high number of Myrtaceae species within moist forests. Myrtle rust impacts new season growth and flower and fruit material which reduces the ability of plants to grow and reproduce. Flowering, fruiting and recruitment of this species is uncommonly encountered since the introduction of myrtle rust. As mature plants in a population die, they may not be replaced at a sufficient rate to maintain the population, leading to extinction.

Within the project site, *R. effusa* were all located at the very northern extreme of the CIA along the Cape Tribulation Road and Forest Creek Road in wet notophyll vine forest (RE 7.11.1b) and on the banks in areas of RE 7.3.5a. The total population within the CIA was 10 individual plants in 6 locations (**Figure 7**). Several small plants were observed in the ground layer suggesting potential recruitment within the population. However, due to the suckering nature of this species in response to disturbance through wind and flood impact, it was difficult to determine if these plants had recently germinated or were suckering shoots from the roots of nearby mature plants. Myrtle rust infection was commonly recorded on most plants of this species.

Plate 8. *Rhodomyrtus effusa* on the project site with three-veined leaves in opposite pairs. Growth form and habit (left) and underside leaf material (right)





4.3.4 Pale Chandelier Orchid – *Acriopsis emarginata* (Vulnerable NC Act 1992 and EPBC Act 1999)

Acriopsis emarginata (Pale Chandelier Orchid) is listed as Vulnerable under the NC Act and EPBC Act and was recorded at a single location within 100 m of the proposed clearing alignment. This species is recorded within Australia from the tip of Cape York Peninsular to the Daintree River (AVH 2022). Within this range *A. emarginata* is restricted to lowland rainforest margins and swamps within an elevational range of 0-300 asl (Jones et al. 2006).

Acriopsis emarginata is an epiphytic or lithophytic plant within the Orchidaceae family. It is frequently recorded growing on the stems of *Melaleuca* spp., palms, and *Pandanus* spp. Pseudobulbs are crowded in tight clumps and are ovoid in shape up to 7 cm in length and green in colour. Leaves are sessile and erect and are held at the apical end of the pseudobulb in groups of 2-4. This species is readily distinguished in the field by its thin much branched aerial roots than cover much of the clumping pseudobulbs where the plant attaches to the host tree (see **Plate 9**).

Within the CIA, *Acriopsis emarginata* was recorded at a single location on the northern side of the Daintree River within mangrove vegetation community RE 7.1.1. It was recorded growing on the upper trunk of a *Bruguiera* sp. trunk at approximately 5 m in height with an easterly orientation (**Plate 9**).

Plate 9. *Acriopsis emarginata* recorded within the CIA within RE 7.1.1



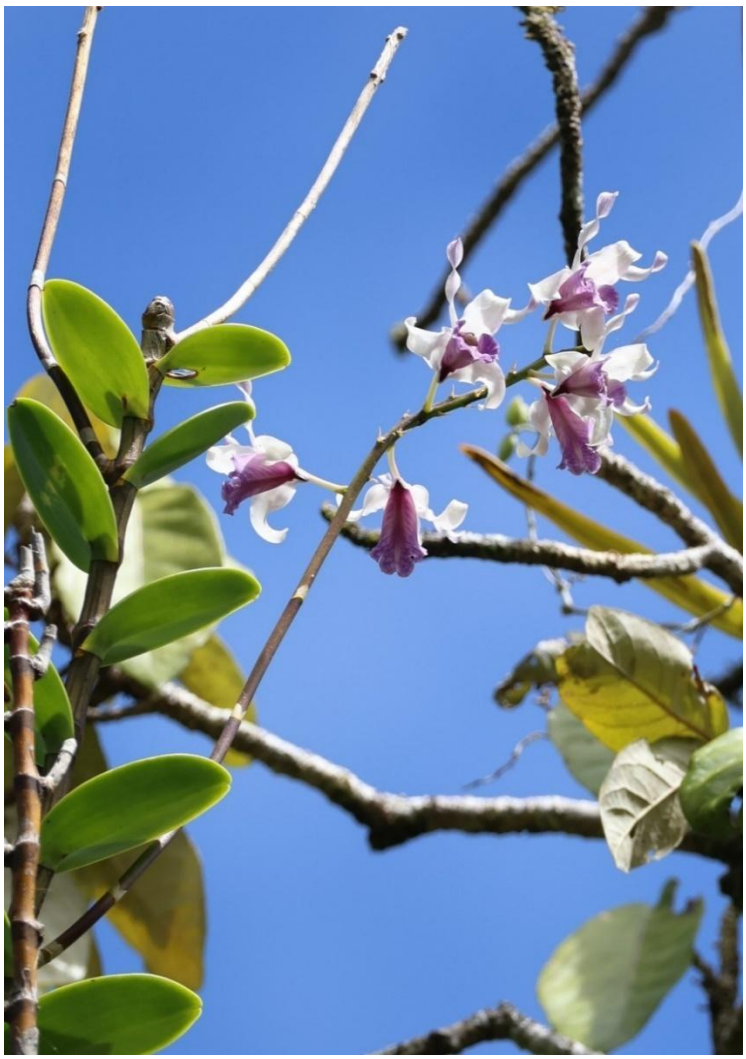
4.3.5 Blue Antler Orchid – *Dendrobium nindii* (Endangered NC Act 1992 and EPBC Act 1999)

Dendrobium nindii (Blue Antler Orchid) is listed as Endangered under the NC Act and EPBC Act, and was recorded as 23 individual plants within 100 m of the proposed clearing alignment. This species is recorded within Australia from the McIlwraith Range on the Cape York Peninsula south to Innisfail (Australian Government, 2008). Within this range the orchid is restricted to sea-level and < 400m asl near-coastal swamps, coastal rainforests, mangroves, and gorges.

Dendrobium nindii is an epiphytic plant within the Orchidaceae family. The plant forms stiffly erect, cylindrical, ribbed, dark brownish to blackish pseudobulbs that are leafy in the upper half. It bears 6–22 leaves that grow 8–15 cm long. Leaves are dark green and leathery, and often concave and notched (Jones, 2006). The raceme is 20–50 cm long, carrying 8–20 flowers (Jones, 2006). This species is readily distinguished in the field from the similar D. undulatum by its blunter leaf-tips and blue-purple flowers (see **Plate 9**).

Within the CIA, this orchid was recorded at 19 different locations totalling 23 plants on the northern side of the Daintree River within mangrove vegetation community RE 7.1.4a. It was recorded growing on the upper trunk of both Melaleuca and Heritiera trunks at approximately 7-9 m in height.

Plate 9. *Dendrobium nindii* recorded within the CIA within RE 7.1.4a



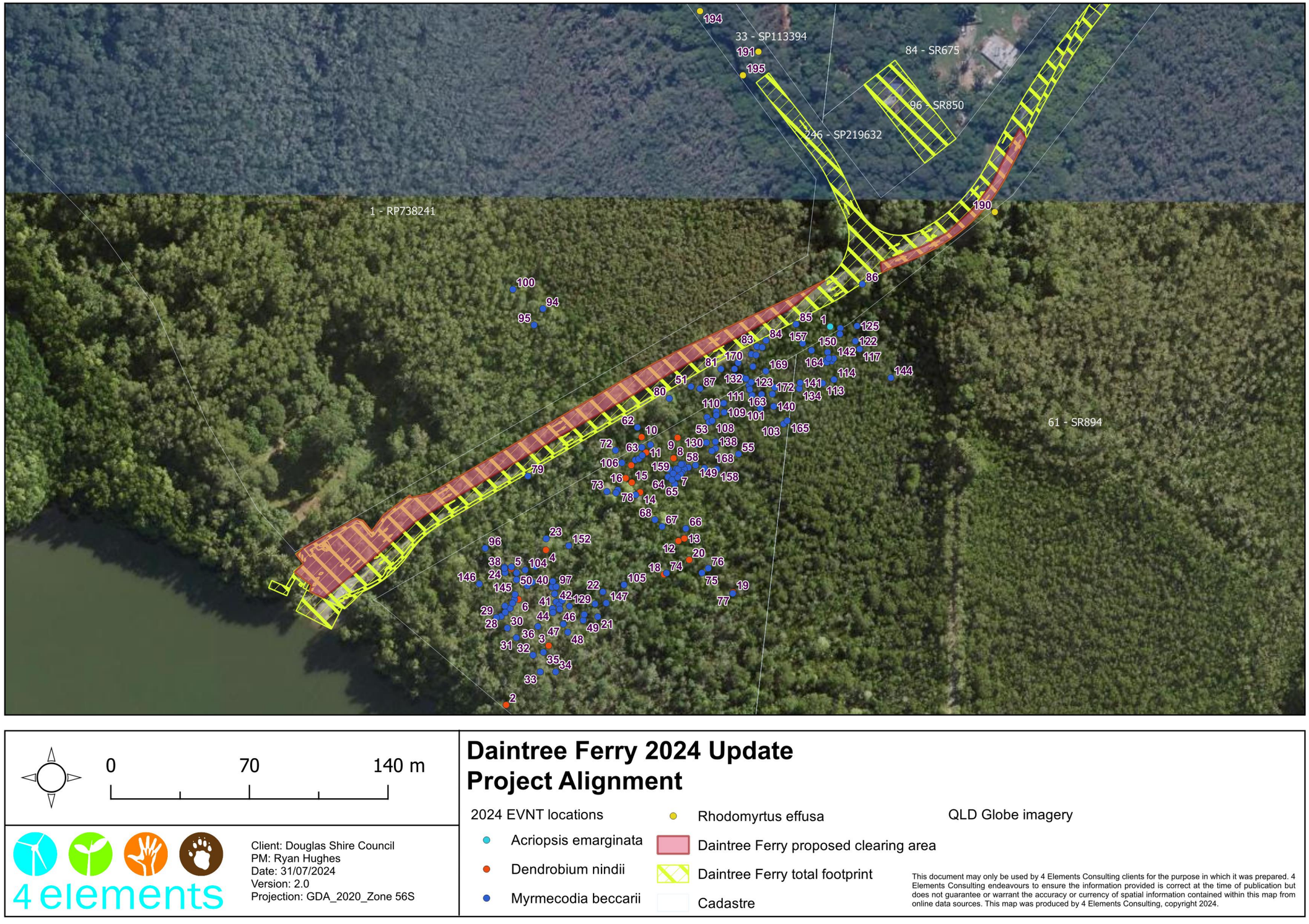


Figure 5. Location of threatened flora (northern alignment)

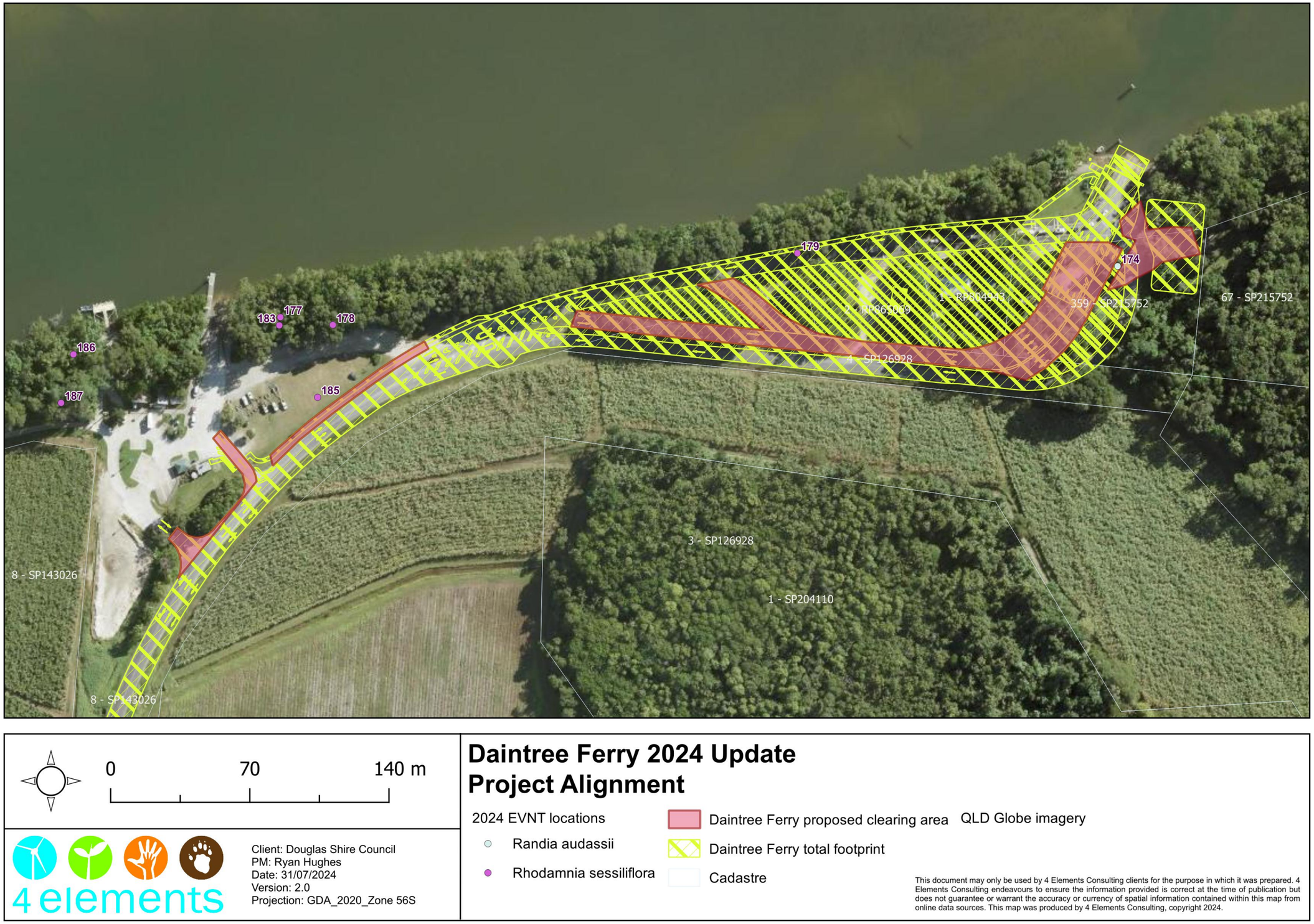


Figure 6. Location of threatened flora (southern alignment)

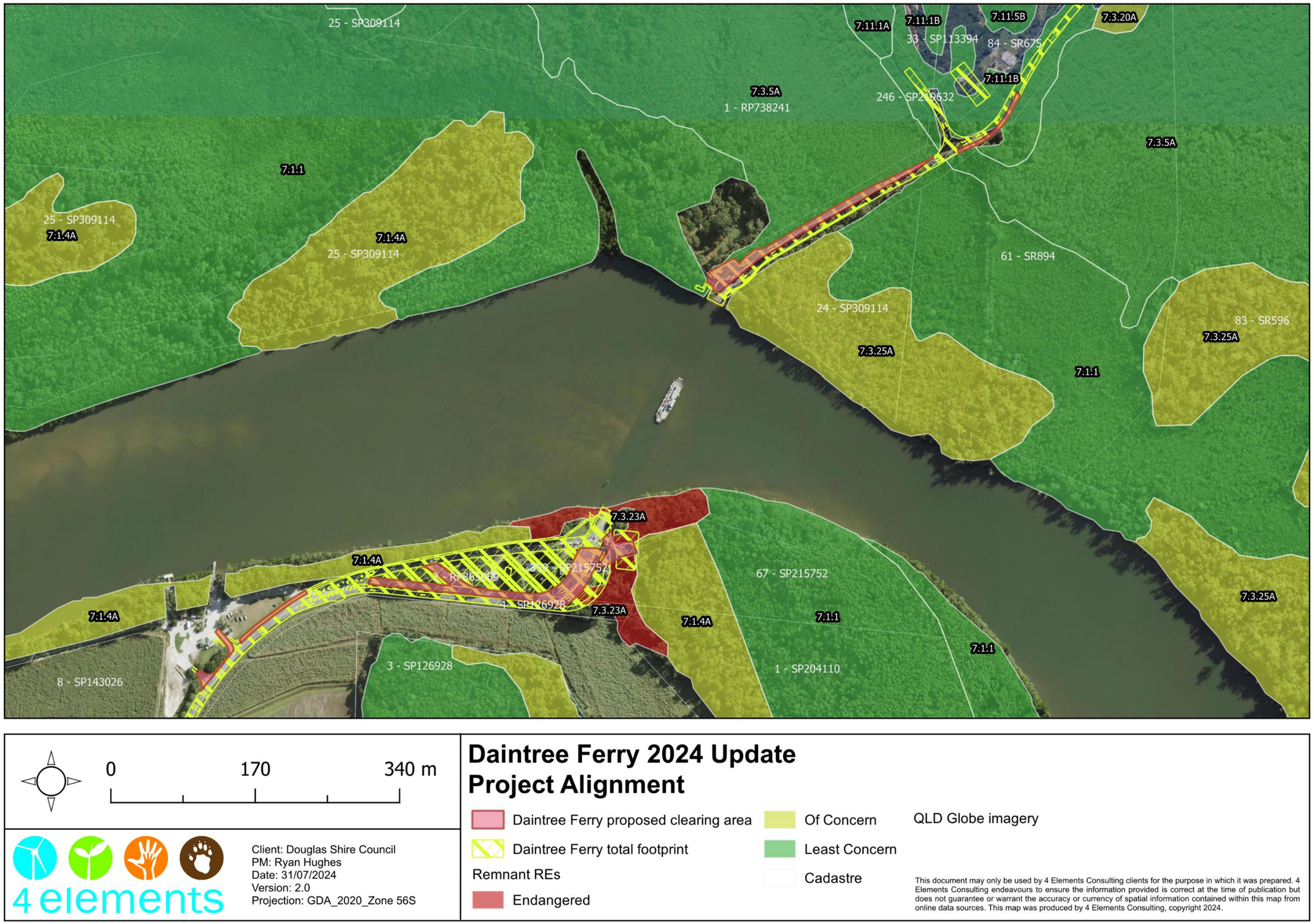


Figure 7. Vegetation Management Act Class vegetation within the project site

4.4 Invasive weeds

Of the 42 weed species encountered during the surveys, all were encountered directly adjacent to remnant vegetation areas which included native vegetation clearance boundaries where they formed a dominant structural component of the ground layer. No weeds of national significance (WoNS) were recorded within the CIA. No prohibited invasive weeds listed under the *Biosecurity Act 2014* were recorded during the survey. Two (2) Category 3 restricted invasive weeds listed pursuant to this Act, were recorded: Singapore Daisy (*Sphagneticola trilobata*), observed in areas around the fringes of vine forest and mangroves, and Pond Apple (*Annona glabra*) which was found in at location – 16.26142, 145.39824 growing on the edge of clearing adjacent RE 7.1.4a. No priority weeds listed under the Douglas Shire Biosecurity plan were recorded within the project site.

5.0 Fauna survey results

5.1 Opportunistic fauna

Fifty-two (52) species of fauna were recorded within the project site including two (2) species of amphibian, one (1) reptile, 47 birds and one (1) mammal. **Table 6** identifies all individuals detected during the survey period and their conservation status as per the NC Act 1992 and EPBC Act 1999.

Table 6. Fauna species recorded during the project site survey

Common Name	Scientific Name	EPBC Act Status	NC Act Status
White-lipped Tree-frog	*Nyctimystes infrafrenatus*	-	LC
Cane Toad	*Rhinella marina*	-	-
Estuarine Crocodile	***Crocodylus porosus***	**Ma**	**V**
Spectacled Flying Fox	***Pteropus conspicillatus***	**E**	**E**
Australasian Darter	*Anhinga novaehollandiae*	-	LC
Australian Figbird	*Specotheres vielloti*	-	LC
Australia Brush Turkey	*Alectura lathami*	-	LC
Australian Hobby	*Falco longipennis*	-	LC
Australian Pelican	*Pelecanus conspicillatus*	-	LC
Azure Kingfisher	*Ceyx azureus*	-	LC
Bar-shouldered Dove	*Geopelia humeralis*	-	LC
Black butcherbird	*Cracticus quoyi*	-	LC
Black-faced Cuckoo-shrike	*Coracina novaehollandiae*	-	LC
Black Kite	*Milvus migrans*	-	LC
Brahminy Kite	*Haliastur indus*	-	LC
Sulphur Crested Cockatoo	*Cacatua galerita*	-	LC
Chestnut-breasted Mannikin	*Lonchura castaneothorax*	-	LC
Eastern Osprey	*Pandion cristatus*	-	LC
Emerald Dove	*Chalcophaps indica*	-	LC
Fan-tailed Cuckoo	*Cacomantis flabelliformis*	-	LC
Forest Kingfisher	*Todiramphus macleayii*	-	LC
Galah	*Eolophus roseicapilla*	-	LC
Golden-headed Cisticola	*Cisticola exilis*	-	LC

Common Name	Scientific Name	EPBC Act Status	NC Act Status
Little Egret	*Egretta garzetta*	-	LC
Rufous Shrike-thrush	*Collurincla rufogaster goodsoni*	-	LC
Great Egret	*Ardea alba*	-	LC
Green Oriole	*Oriolus flavocinctus*	-	LC
Large-billed Gerygone	*Gerygone magnirostris*	-	LC
Leaden Flycatcher	*Myiagra rubecula*	-	LC
Macleay's Fig-parrot	***Cyclopsitta diophthalma* subsp. *macleayana***	-	**V**
Magpie Lark	*Grallina cyanoleuca*	-	LC
Mangrove Gerygone	*Gerygone levigaster*	-	LC
Mistletoebird	*Dicaeum hirundinaceum*	-	LC
Nankeen Night Heron	*Nycticorax caledonicus*	-	LC
Olive-backed Oriole	*Oriolus sagittatus*	-	LC
Olive-backed Sunbird	*Cinnyris jugularis*	-	LC
Orange-footed Scrub Fowl	*Megapodius reinwardt*	-	LC
Papuan Frogmouth	*Podargus papuensis*	-	LC
Peaceful Dove	*Geopelia striata*	-	LC
Rainbow Bee-eater	*Merops ornatus*	-	LC
Rainbow Lorikeet	*Trichoglossus haematodus*	-	LC
Rajah Shellduck	*Tadorna radjah*	-	LC
Sacred Kingfisher	*Todiramphus sanctus*	-	LC
Shining Flycatcher	*Myiagara alecto*	-	LC
Torresian Imperial Pigeon	*Ducula spilorrhoa*	-	LC
Welcome Swallow	*Hirundo neoxena*	-	LC
Whistling Kite	*Haliastur sphenurus*	-	LC
White-bellied cuckoo shrike	*Coracina papuensis*	-	LC
White-breasted Woodswallow	*Artamus leucorynchus*	-	LC
Wompoo Fruit Dove	*Ptilinopus magnificus*	-	LC
Yellow-spot Honeyeater	*Melphaga ornata*	-	LC

Mi: Migratory, Ma: Marine, CE: Critically Endangered, E: Endangered, V: Vulnerable, NT: Near Threatened, SLC: Special Least Concern

5.2 Threatened fauna

During the site assessment within the project site, a total of three (3) threatened fauna species were recorded.

- Estuarine Crocodile (*Crocodylus porosus*) Vulnerable *NC Act 1992*
- Macleay's Fig Parrot (*Cyclopsitta diophthalma macleayana*) Vulnerable *NC Act 1992*
- Spectacled Flying Fox (*Pteropus conspicillatus*) Endgangered EPBC act 1999 and *NC Act 1992*

5.2.1 Estuarine Crocodile (Marine EPBC Act 1999, Vulnerable NC Act 1992)

Along the east coast of Australia, the Estuarine Crocodile (*Crocodylus porosus*) is found between Cape York to Gladstone. It is a large, bodied reptile up to 4 m in length weighing up to 300 kg. They are mostly recorded within estuarine environment; however, they may occur in freshwater bodies several hundred kilometres inland from the coast. The Estuarine Crocodile feeds on smaller bodied prey items such as frogs, crustaceans and insects when young. As adults they will eat larger bodied vertebrates including macropods, pigs and other crocodiles.

Within the clearance impact area, the Estuarine Crocodile was recorded within the Daintree River swimming upstream nearest to the southern bank. It is likely that this species would utilise the complex mangrove vegetation for shelter foraging for prey and sheltering and basking. Newly hatched young are commonly observed sheltering on the densely vegetated mangrove shoreline of the Daintree River. Clearing of these mangrove vegetation communities is expected to impact only generic foraging/sheltering habitat for this species with extensive foraging habitat remaining directly adjacent to the proposal.

5.2.2 Macleay's Fig Parrot (Vulnerable NC Act 1992)

The Macleay's Fig Parrot (*Cyclopsitta diopthalma* subsp. *macleayana)* is a small-bodied parrot, restricted to lowland tropical rainforest Between Cooktown and Cardwell (Forshaw 1979). This species utilises resources in a diversity of landscapes: farms, eucalypt forests, melaleuca swamps, littoral and urban areas. This species generally roosts within or near rainforest. It is an obligate hollow nesting species commonly utilising very small diameter tree hollows located high in the canopy within lowland rainforest. It forages exclusively on figs from a wide variety of native fig tree species.

Within the clearance impact area, the Macleay's Fig Parrot was recorded frequently foraging within RE 7.3.5 in the north of the project site and along the southern bank of the Daintree River within RE 7.3.23a. These habitats are considered the most suitable areas for foraging and nesting of this species as they contain *Ficus* spp. in the canopy and understory layers of the communities. Clearing of these vegetation communities is expected to clear only generic foraging habitat for this species with extensive foraging habitat provided directly adjacent to the proposal.

5.2.3 Spectacled Flying Fox (Endangered EPBC Act 1999, NC Act 1992)

The Spectacled Flying-fox (*Pteropus conspicillatus)* is a large flying-fox, occurring in the vicinity of tropical forest in the Iron Range and Wet Tropics within Australia (Churchill 2008). This species utilises resources in a diversity of landscapes- farms, eucalypt forests, melaleuca swamps, littoral and coastal forests, mangroves and urban areas (DCCEEW 2023). This species generally camps within or near rainforest, however they able to easily cover 50-100 km in a single night. During the dry season the species is known to disperse with animals moving away from the roost site to an unknown location (Shilton *et al*. 2008). Young are born from October to December, and weaned at 5 months but continue to be cared for in creches for many more months (Dennis 2012). Current research on the species suggests they utilise a wide variety of plant resources outside of rainforest fruits including pollen and nectar from dry sclerophyll forests.

Within the clearance impact area, the Spectacled Flying Fox was recorded as a fly-over along the southern bank of the Daintree River (2023) and as part of a seasonal roosting colony (2024). The roost exceeded 100 individuals utilising *Melaleuca* spp. canopies. The most suitable areas of habitat include RE 7.3.23a and RE 7.3.5a. Clearing of these vegetation communities will likely only clear generic foraging habitat for this species with extensive foraging habitat provided directly adjacent to the proposal.

Plate 11. Spectacled Flying-fox seasonal roosting colony observed in RE 7.3.5a to the northwest of the project alignment (clearing proposal) on the northern side of the Daintree River



5.3 Project site habitat attributes

The below **Table 7** identifies habitat attributes for threatened fauna and if present the assessment determines the site-specific value of these features to threatened fauna.

Table 7. Habitat attributes present on the project site

Habitat type	Project site	Potential value for threatened species
Connectivity	The project site provides a continuation of high connectivity for threatened flora and fauna within the greater property. Existing sealed roads are present within the project site and the proposal seeks to increase the number of lanes for ferry passenger vehicles. Therefore, vegetation clearing will effectively widen the width of roads. As all clearing is directly adjacent to existing transport infrastructure, it is not considered that the proposal will result in a reduction of connectivity for threatened species however.	The proposed clearing alignment of category B vegetation (approx. 0.3 ha) represents a minor portion of larger habitat/foraging ranges for the: - Ant plant (confirmed) - Pale Chandelier orchid (confirmed) - *Rhodamnia sessiliflora* (confirmed) - Blue Antler orchid (confirmed) - *Rhodomyrtus effusa* (confirmed) - Southern Cassowary (moderate) - Spectacled Flying Fox (confirmed) - Bennet's Tree Kangaroo (moderate) - Macleay's Fig Parrot (confirmed) - White-throated Needletail (Likely) - Semon's Leaf-nosed Bat (Moderate) - Large-eared Horseshoe Bat (Moderate)
Vegetative ground cover	Vegetative ground cover was largely absent from the project site. This was primarily due to regular tidal inundation and or periodic flooding events. Where tidal inundation was not present (RE 7.3.5 and RE 7.3.23) a closed canopy was present which reduces the ability for grass and herbs to persist in low light environments.	No specific threatened species value.

Habitat type	Project site	Potential value for threatened species
Leaf litter	Leaf litter accumulation was relatively low throughout the project site. This is primarily due to regular tidal inundation and or periodic flooding events. RE 7.3.23 and RE 7.3.5 was the only portion of the project site that had litter accumulation.	No specific threatened species value.
Coarse woody debris (CWD)	The mature vegetation structure provided a common source of fallen timber within RE 7.3.23 and RE 7.3.5 only. All other vegetation communities present within the project site are subject to regular tidal inundation which reduces the ability for CWD accumulation.	No specific threatened species value.
Tree hollows	The mature vegetation structure provided a common source of arboreal tree hollows across the project site within RE 7.3.5 and RE 7.3.23 only. Within these areas, tree hollows were small (5-10cm diameter). They were associated with the larger Melaleuca trees present throughout the property.	The proposed clearing alignment of 0.3 ha of remnant vegetation under the *Vegetation Management Act 1999* (VM Act 1999) under the *Vegetation Management Act 1999* (VM Act 1999) (approx. 0.3 ha) provides potential arboreal roosting and nesting habitat for the: - Macleay's Fig Parrot - Semon's Leaf-nosed Bat - Large-eared Horseshoe Bat
Shrub layer containing Melaleuca, Acacia, Banksia, Xanthorrhoea species	The shrub layer was sparse throughout due to tidal inundation or a closed canopy structure	No specific threatened species value.
Primary nectar sources	Syzygium spp. and Melaleuca spp. canopy species present produce abundant food source for nectivorous species.	Provides a potential generic food source for the Spectacled Flying Fox (NC Act 1992 and EPBC Act 1999, Endangered).

Habitat type	Project site	Potential value for threatened species
Fleshy-fruiting species including *Ficus spp*.	The rainforest present on the southern portion of the alignment provides large fleshy fruiting species to establish. Some small *Ficus* spp. were occasionally recorded within the project site.	These trees were present at the shrub and canopy layer and would likely be utilised by Spectacled Flying Fox (NC Act 1992 and EPBC Act 1999, Endangered) and Macleay's Fig Parrot (NC Act, Vulnerable).
Rock outcrops	Most of the project site is located within estuarine sediments.	Absent
Water bodies	The Daintree River is a major river that dissects the project site. This is fringed by stilt rooted mangrove species proving a complex structural habitat with a dense closed canopy. The remaining areas of the site are located on estuarine soils which are subject to regular tidal inundation. The alluvial soil vegetation communities are located immediately above the water table which can raise to be above the surface after periods of heavy rains.	The entire project site provides suitable habitat for the Estuarine Crocodile (NCA Act 1992, Vulnerable)

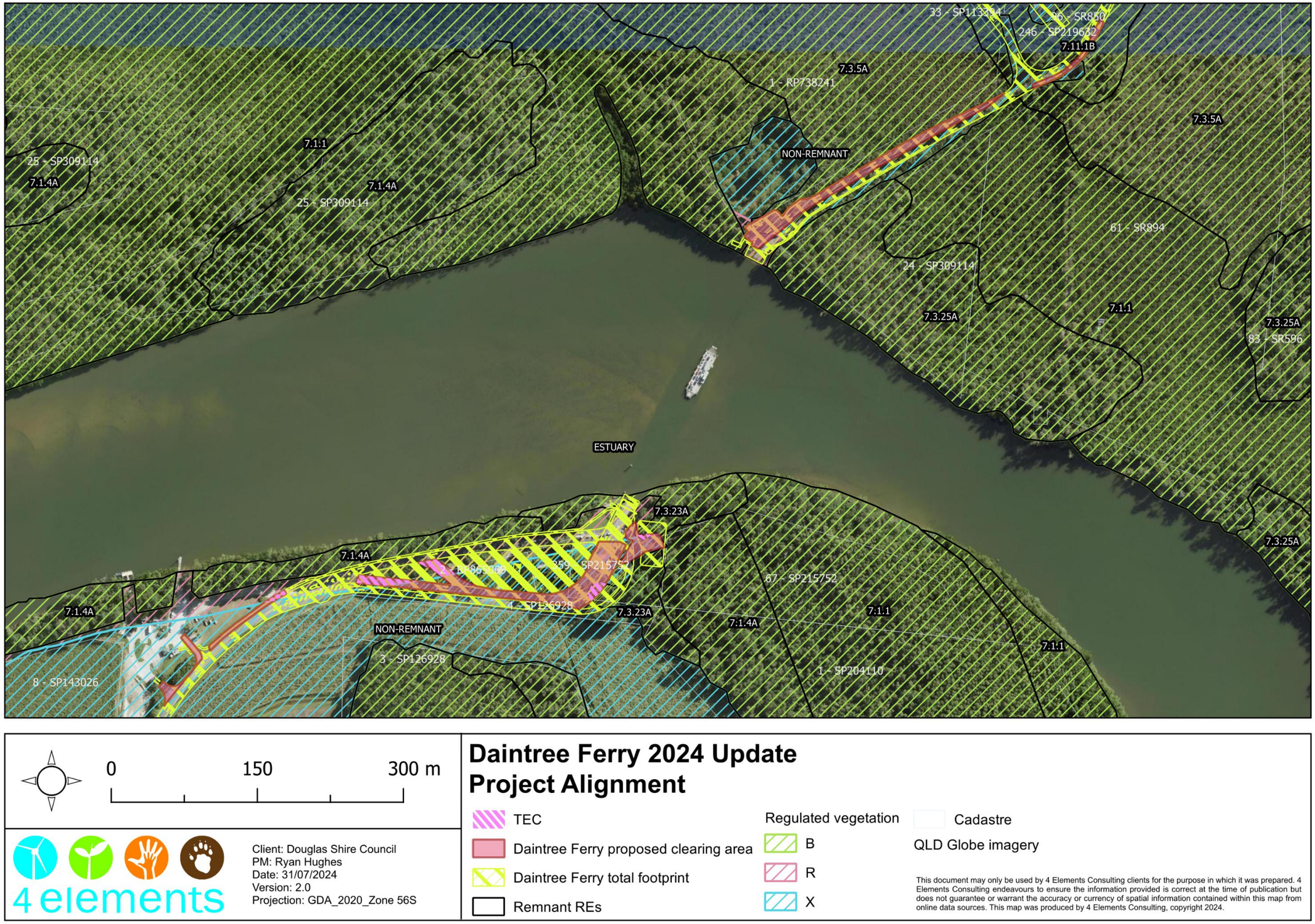


Figure 8. **Regulated vegetation mapping at the project site (as per REDD and TEC description – see Section 6.1.3)**

6.0 Significant Impact Assessment

6.1 Significant Impact Assessment for Matters of National Significance (MNES)

Individual significant impacts assessments (SIA) have been conducted on species identified as potentially at risk of impact from the development. The SIAs differ between EPBC Act 1999-listed and NC Act 1992-listed species and are explained in the following sections.

6.1.1 Threatened Species

The Department of Climate Change, Energy, Environment and Water (DCCEEW) notes an action is likely to have a significant impact on an endangered species if there is a real chance or possibility that it will:

- Lead to a long-term decrease in the size of a population
- Reduce the area of occupancy of the species
- Fragment an existing population into two or more populations
- Adversely affect habitat critical to the survival of a species
- Disrupt the breeding cycle of a population; and/or
- modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline

Impact assessments were conducted on EPBC-listed species considered to have at least a moderate likelihood of occurring within the project site. These potentially occurring species are:

- Southern Cassowary (Endangered)
- White-throated Needletail (Vulnerable)
- Freshwater Sawfish (Vulnerable)
- Green Sawfish (Vulnerable)
- Semon's Leaf-nosed Bat (Vulnerable)
- Large-eared Horseshoe Bat (Vulnerable)
- Spectacled Flying Fox (Endangered)
- Pale Chandelier Orchid (Vulnerable)
- Ant Plant (Vulnerable)
- Blue Antler Orchid (Endangered)

A significant impact assessment (SIA) was undertaken for each of the above species which concluded that no species were at risk of a significant impact because of the proposal. Therefore, a referral to the Department of Climate Change, Energy, Environment and Water for assessment is not a requirement of the proposal. The SIA is presented in **Appendix F**.

6.1.2 Migratory Species

The DCCEEW notes an action is likely to have a significant impact on a migratory species if there is a possibility it will:

- Substantially modify (including by fragmenting, altering fire regimes, altering nutrient cycles or altering hydrological cycles), destroy or isolate an area of important habitat for a migratory species
- Result in an invasive species that is harmful to the migratory species becoming established in an area of important habitat for the migratory species
- Seriously disrupt the lifecycle (breeding, feeding, migration or resting behaviour) of an ecologically significant proportion of the population of a migratory species

The species considered moderate and highly likely to occur on site are:

- Rufous Fantail
- Spectacled Monarch
- Oriental Cuckoo
- Barn Swallow
- Osprey
- Black-faced Monarch
- Australian Snubfin Dolphin
- Australian Humpback Dolphin
- Estuarine Crocodile

None of the above-listed species accumulate in significant numbers locally to lead to the disturbance of large numbers of individuals as a result of the proposal. It is considered highly unlikely that a total vegetation clearance of 0.93 ha of marginal habitat for the proposal will impact on ecologically significant habitat for these species such that it interferes with the breeding, foraging or roosting. External to the project site, there are large tracts of available habitat for these species to utilise. The results of this assessment determined there will be no significant impact on migratory species.

As a result, a referral to DCCEEW is not required for this matter.

6.1.3 Threatened Ecological Communities

The DCCEEW notes an action is likely to have a significant impact on a critically endangered, endangered, or vulnerable (threatened) ecological community if there is a real chance or possibility that it will:

- Reduce the extent of an ecological community
- Fragment or increase fragmentation of an ecological community, for example by clearing vegetation for roads or transmission lines
- Adversely affect habitat critical to the survival of an ecological community

- Modify or destroy abiotic (non-living) factors (such as water, nutrients, or soil) necessary for an ecological community's survival, including reduction of groundwater levels, or substantial alteration of surface water drainage patterns
- Cause a substantial change in the species composition of an occurrence of an ecological community, including causing a decline or loss of functionally important species, for example through regular burning or flora or fauna harvesting
- Cause a substantial reduction in the quality or integrity of an occurrence of an ecological community, including, but not limited to:
    - assisting invasive species, that are harmful to the listed ecological community, to become established
    - causing regular mobilisation of fertilisers, herbicides or other chemicals or pollutants into the ecological community which kill or inhibit the growth of species in the ecological community, or interfere with the recovery of an ecological community.

6.1.3.1 Tropical Lowland Rainforest of the Wet Tropics Impact Assessment

A single TEC (Tropical Lowland Rainforest of the Wet Tropics) was present within the southern side of the project site (mapped by the Queensland Herbarium and Department of Resources as congruent category R high-value reef regrowth RE 7.3.23a (0.08 ha – approx. 9% of the total 0.93 ha clearing footprint) and category B remnant vegetation RE 7.3.23a (0.03 ha – approx. 3% of total clearing footprint)) (see **Figure 8** and **Section 4**). However, ground-truthing of this community in 2025 determined that no Category B RE 7.3.23a overlapped with the project site clearing footprint, and although mapped as Category R RE 7.3.23a along the southern roadway, it is ground-truthed to be already cleared land. The proposal seeks to align with these existing clearings.

The area mapped as Category B will only require the removal of disturbed vegetation comprising a canopy of *Cocos nucifera* and *Magnifera indica* (12-15m) with *Philodendron* sp. dominating the stems of canopy trees. The understory is largely clear of recruitment with a ground-layer dominated by exotic species such as *Axonopus compressus,* and *Nephrolepis* sp., and is largely mown for car parking and storage (see **Plates 12a – 12b**). In this light, the areas mapped as RE 7.3.23a that overlap with the proposed alignment for clearing under the Queensland regulated vegetation mapping as RE 7.3.23a, are **NOT** regarded as conforming to the determination for this TEC at this location. All other areas which do conform to this determination will be avoided entirely by the proposal. A detailed description of the determination for the TEC are provided in the below.

The minimum thresholds for identifying a vegetation community that conforms to the EPBC-listed TEC is provided below:

- Located from immediately south of the Cardwell Range up to the northern boundary of the Endeavour Catchment (Cooktown) and typically confined to the east of the coastal ranges (< 100 m asl but mostly < 40 m asl)
- Occurs primarily on fertile soils (alluvial and basaltic parent materials)

- Mean rainfall > 1,300 mm to > 3,500 mm per annum clustered around the period December to March
- Key structural characteristics include an uneven canopy 20 – 40 m in height which is relatively open when in an undisturbed state. Trees are mostly evergreen and can have well developed buttress roots. The leaf length is generally between 12.5 cm – 25 cm (mesophyll)
- The structure can vary from structurally simple (1-2 growth forms dominate) to complex where many growth forms are present without any particular growth form dominating
- Diverse growth forms include palms, vines and robust lianas, epiphytic ferns and orchids, climbing aroids, rattans and gingers
- Relatively low abundance of species from the genera *Eucalyptus*, *Corymbia, Melaleuca* and *Casuarina*. Where there is a dominance of these species in the canopy it is unlikely that the vegetation community can be considered a rainforest community.

If a patch meets the above listed criteria, then further factors for legal protection are determined, outlined in **Table 8** and below:

- A patch must be a minimum of 0.1 ha in area
- A patch is given a condition rating dependent on the size of patch/diversity and canopy cover present and the continuity to other native vegetation it provides the landscape
- Therefore, small, isolated patches are not considered legally protected under the EPBC Act 1999 as a TEC.

Plate 12a. Identification of proposed vegetation clearing (red) within mapped RE 7.3.23a (south bank)



Plate 12b. Identification of proposed vegetation clearing (red) within mapped RE 7.3.23a (south bank)



Table 8. Condition classes, categories and thresholds for inclusion of a TEC

Biotic thresholds	**Patch size thresholds**			
	Large patch is at least 5 ha (it may or may not be contiguous with other native vegetation)	**Medium-sized patch is at least 2 ha and < 5 ha** (it may or may not be contiguous with other native vegetation)	**Small contiguous patch is at least 0.1 ha and < 2 ha and is contiguous with a larger area(s) of native vegetation totalling at least 5 ha**	**Small contiguous patch is at least 0.5 ha and < 2 ha which is isolated, or is part of a small native vegetation remnant < 5 ha total**
High condition Cover* of native tree** species is ≥ 50% and/or tree species richness*** ≥ 20 species	**Class A** A large patch that meets key diagnostics and has a high native tree cover and/or high tree species richness	**Class B** A medium-sized patch that meets key diagnostics and has a high native tree cover and/or high tree species richness	**Class C1** A small patch that meets key diagnostics and has a high native tree cover and/or high tree species richness**** and is contiguous***** with another large area(s) of native vegetation	**Class C2** A small patch which meets key diagnostics and has a high native tree cover and/or high tree species richness

Biotic thresholds	Patch size thresholds			
	Large patch is at least 5 ha (it may or may not be contiguous with other native vegetation)	**Medium-sized patch is at least 2 ha and < 5 ha** (it may or may not be contiguous with other native vegetation)	**Small contiguous patch is at least 0.1 ha and < 2 ha and is contiguous with a larger area(s) of native vegetation totalling at least 5 ha**	**Small contiguous patch is at least 0.5 ha and < 2 ha which is isolated, or is part of a small native vegetation remnant < 5 ha total**
Good condition Cover of native tree species is ≥ 30% and/or tree species richness ≥ 10 species	**Class B2** A large patch that meets key diagnostics and has a good native tree cover and/or good tree species richness	**Class C3** A medium-sized patch that meets key diagnostics and has a good native tree cover and/or good tree species richness	Not protected	Not protected
Moderate condition Cover of native tree species is ≥ 30% and/or tree species richness ≥ 10 species	**Class C4** A large patch that meets key diagnostics	Not protected	Not protected	Not protected

* Tree cover is measured along a 100 m transect (Eyre *et al.* 2015), if patch size and geometry allow, cover can be assessed along a shorter transect if required. Crown cover is considered opaque (i.e. solid crown cover) for the purposes of this assessment.

** A native tree is a woody plant > 2 m tall with a single stem or branches well above the base (Eyre *et al.* 2015).

*** Tree richness is measured in 100 x 50 m plots (0.5 ha) (Eyre *et al.* 2015).

**** Note that for patches 0.1 – 0.5 ha in size, and where patches have not already met the threshold for high native tree cover, tree species richness can be assessed in a smaller plot and may allow for a tree richness threshold of 15 species. Note also, assessment includes trees that are < 2 m tall due to their growth stage (e.g. seedlings or saplings).

***** Contiguous with another patch of native vegetation means the patch is continuous with, or in close proximity (within 100 m) to other area(s) of native vegetation.

6.1.4 Property context

Based on the field assessment, the remnant vegetation present to the west and east of the existing ferry along the southern bank of the Daintree River (RE 7.3.23a) conforms to the determination of the TEC Tropical Lowland Rainforest of the Wet Tropics patch present. Based on the above **Table 8**, this area of vegetation is listed as Class C1. This is based on the vegetation being in high condition with a small continuous patch size (average 0.75 ha) see **Figure 8**). However, on-ground assessment determined that vegetation within the proposed clearing alignment is an existing cleared area, or highly compromised and not congruent with the RE 7.3.23a descriptions. Impact will not affect this TEC, and only occur adjacent to it, with limited branch-trimming along existing edges

for the maintenance of access and safety, along with the removal of some palm trees (*Cocos nucifera*) as outlined above.

The below response addresses each of the previous points listed related to the potential to impact this TEC.

- Will the project reduce the extent of an ecological community?
    - The proposal requires branch-trimming around the existing cleared edge of the category R and category B RE 7.3.23a (TEC) for access and safety around existing infrastructure, but will not result in the significant impact of any vegetation that constitutes this TEC. There is 0.11 ha of this TEC mapped as impacted by proposal according to mapping, but ground-truthing provides evidence that these areas are pre-cleared or non-conforming with the RE descriptions.
- Will the project fragment or increase fragmentation of an ecological community, for example by clearing vegetation for roads or transmission lines?
    - The proposal will not fragment the Lowland Tropical Rainforest TEC on site. All clearing proposed is directly adjacent to existing transport infrastructure which is critical to servicing resident and tourist access across the Daintree River.
- Will the project adversely affect habitat critical to the survival of an ecological community?
    - The proposal does not affect any habitat critical to the survival of the TEC. A site-specific Vegetation Management Plan (VMP) will be designed to inform weed control and maintenance of the TEC vegetation as a result of the proposal.
- Will the project modify or destroy abiotic (non-living) factors (such as water, nutrients, or soil) necessary for an ecological community's survival, including reduction of groundwater levels, or substantial alteration of surface water drainage patterns?
    - The proposal has limited ability to impact ground water and surface runoff. Mitigation measures required to manage sedimentation runoff and pollutants within a site-specific Environmental Management Plan (EMP) would significantly reduce the risk of any adverse impacts.
- Will the project cause a substantial change in the species composition of an occurrence of an ecological community, including causing a decline or loss of functionally important species, for example through regular burning or flora or fauna harvesting?
    - A significant impact assessment (SIA - **Appendix F**) determined that that the project proposal has no reasonable likelihood of resulting in a significant impact to any of the below-listed species that may potentially utilise the TEC present within the project site.
    - The EPBC-listed species considered to have at least a moderate likelihood (or confirmed likelihood) of occurring within the TEC are:
        - **Southern Cassowary (Endangered)**
        - **Spectacled Flying Fox (Endangered)**
        - **White-throated Needletail (Vulnerable)**

- **Semon's Leaf-nosed Bat (Vulnerable)**
- **Large-eared Horseshoe Bat (Vulnerable)**

- Will the project cause a substantial reduction in the quality or integrity of an occurrence of an ecological community, including, but not limited to:

  a) assisting invasive species, that are harmful to the listed ecological community, to become established

  b) causing regular mobilisation of fertilisers, herbicides or other chemicals or pollutants into the ecological community which kill or inhibit the growth of species in the ecological community

  - The proposal is unlikely to introduce any new harmful species, nor does it involve chemicals which may harm the TEC directly or indirectly. Mitigation measures under a VMP will be designed to inform a proper and efficient mode of managing weeds that may establish within the TEC that reduces the risk of inappropriate herbicide usage.

- Will the project interfere with the recovery of an ecological community?

  - The proposal has minimal potential to impact the recovery of the TEC given that it will not be directly impacted, and potential indirect impacts can be managed under a VMP, and the area of TEC within the project site.

Based on the above assessment it is determined that the proposal has no reasonable likelihood of resulting in a significant impact to the TEC present within the project site. **As a result, a referral to DCCEEW is not required for impacts to a TEC**.

6.2 Matters of State Environmental Significance (MSES)

The following table (**Table 9**) details the guidelines to which a certain application may have a significant impact on an MSES.

Table 9. Matters of State Environmental Significance (MSES)

Matters of State Environmental Significance	Triggers
Regulated Vegetation (VMA)	
1) The prescribed Regional Ecosystems (REs) that are endangered regional ecosystems comprise a matter of State Environmental Significance. 2) The prescribed REs that are of concern regional ecosystems comprise a matter of State Environmental Significance.	1) A single Endangered RE 7.3.23a (0.11 ha) is mapped as regulated vegetation within the project site. However, ground-truthing in July 2025 determined that none (0 ha) of this Category B or R Endangered vegetation is within the project site, despite the mapping. Updated ground-truthed mapping

Matters of State Environmental Significance	Triggers
3) A prescribed RE is a matter of State Environmental Significance if it is— a. an RE that intersects with an area shown as a wetland on the vegetation management wetlands map (to the extent of the intersection); or b. an area of essential habitat on the essential habitat map for an animal that is endangered wildlife or vulnerable wildlife or a plant that is endangered wildlife or vulnerable wildlife. 4) A prescribed RE is a matter of State Environmental Significance to the extent the ecosystem is located within a defined distance from the defining banks of a relevant watercourse.	is presented in **Figure 9** to show this. None of the Herbarium-mapped area overlapping the project site constitutes this RE on-ground. **The proposal will clear 0 ha of Endangered regulated vegetation.** 2) A single Of Concern RE mapped as Category B regulated vegetation is recorded at the project site (RE 7.1.4a). This was ground-truthed in 2025 as occurring within the proposed project site clearing area, around the eastern edge (spoil storage area) of the southern alignment (**Figure 9**). **An area of 235 m^2 (0.02 ha) of this regulated vegetation is proposed to be cleared as a result of the proposal.** 3) A portion of the project site is located within an area shown as a High Ecological Significance (HES) wetland on the vegetation management wetlands map. This occurs on the northwest side of Cape Tribulation Road on the northern side of the Daintree River. An area of 0.24 ha is proposed to be cleared for widening the built road alignment on the western side of the existing roadway (see **Figure 8**). As per a SARA pre-lodgement meeting record (Ref # 2111-25845 SPL – 22 November 2021), if there is no significant change to the hydrology of the northern side of the Daintree River adjacent to the HES wetland resulting from the proposed clearing alignment, then there is no requirement for a referral. A hydrological study is recommended to determine this. 4) All remnant vegetation within the project site is located within an area shown as Essential Habitat for an animal or plant that is endangered or vulnerable wildlife. The proposal requires the clearance of Essential Habitat (0.3 ha) listed under the VM Act 1999 (**Figure 12**). This is mapped for the

Matters of State Environmental Significance	Triggers
	Estuarine Crocodile, Southern Cassowary, Spectacled Flying Fox, Diadem Leaf-nosed Bat, Macleay's Fig Parrot, *Acronychia acuminata* and *Isachne sharpii*. The field survey determined that Spectacled Flying Fox, Estuarine Crocodile and Macleay's Fig Parrot do utilise the project site and that there is reasonable likelihood for Southern Cassowary to utilise this area too. **The clearance of 0.3 ha of Essential Habitat will require an offset.** 5) The proposal is located within 500m (approx. 150m) of a defined bank of a relevant watercourse defined under the (Queensland *Water Act 2000*). However, no temporary or permanent watercourse diversion is proposed as part of the alignment and so a water license pursuant to the Act, and the Environmental Protection Act 1994, is not required. **A financial offset is required for 0.02 ha of Of Concern RE 7.1.4a, as per the Regulated Vegetation Mapping** **A financial offset is required for 0.24 ha of HES Wetland**. **A financial offset is required for 0.3 ha of Essential Habitat**.
Connectivity Areas	
1) This section applies to a prescribed RE: i. to the extent the ecosystem contains remnant vegetation; and ii. if the ecosystem contains an area of land that is required for ecosystem functioning (a connectivity area) 2) The prescribed RE is an MSES if the administering agency is satisfied, having had regard to criteria in the environmental offsets policy about connectivity areas, that:	1) a) Remnant vegetation is proposed to be cleared as part of the proposed development. b) The project site is mostly located within a state-wide terrestrial biodiversity corridor (see **Appendix D** for Regulated Vegetation Mapping). 2) As a result of the proposal, it is expected that connectivity areas will maintain healthy

Matters of State Environmental Significance	Triggers
a. the connectivity area is of sufficient size or configured in a way that maintains ecosystem functioning; and b. the prescribed RE will remain despite a threatening process within the meaning of the NC Act 1992.	ecosystem functioning. All clearing will be on the edge of existing clearing so as to reduce fragmentation. 3) A construction management plan (CMP) relating to erosion and sediment control will provide recommendations so that residual impacts are managed, and remnant vegetation proposed to be retained within the greater property boundary will retain connectivity and biodiversity corridors throughout the property. **As a result, a referral to SARA is not required for this matter**.
Wetlands and Watercourses	
1) Each of the following matters is an MSES: a. a wetland b. in a wetland protection area c. of high ecological significance shown on the map of referable wetlands d. a wetland or watercourse in high ecological value waters	1) The entire northern bank of the Daintree River occurs within a wetland protection area. A total of 0.24 ha of this MSES will be cleared as a result of the proposal. i. The northern section of the project alignment occurs within an area of HES wetlands shown on the map of referable wetlands. A total of 0.24 ha of this MSES is required to be cleared as a result of the proposal. ii. As per a SARA pre-lodgement meeting record (Ref # 2111-25845 SPL – 22 November 2021), if there is no significant change to the hydrology of the northern side of the Daintree River adjacent to the HES wetland resulting from the proposed clearing alignment, then there is no requirement for a referral. A hydrological study is recommended to determine this. 2) No portion of the property occurs within a wetland or watercourse in high ecological

Matters of State Environmental Significance	Triggers
	value waters (HEV). The nearest wetland in high ecological value waters is Lot 24 SP309114 located southeast of Cape Tribulation Road on the northern side of the Daintree River. The proposal does seek to impact this area (**Figure 10**). **A financial offset is required for 0.24 ha of HES Wetland**.
Designated Precinct in a Strategic Environmental Area	
1) A designated precinct in a strategic environmental area is an MSES.	The project site is not located within a strategic environmental area.
Protected Wildlife Habitat	
1) An area that is shown as a high-risk area on the flora survey trigger map and that contains plants that are endangered wildlife or vulnerable wildlife is an MSES. 2) An area that is not shown as a high-risk area on the flora survey trigger map, to the extent the area contains plants that are endangered wildlife or vulnerable wildlife, is an MSES. 3) A non-juvenile koala habitat tree located in an area shown as bushland habitat, high value rehabilitation habitat or medium value rehabilitation habitat on the map called 'Map of Assessable Development Area Koala Habitat Values' that applies under the Southeast Queensland Koala Conservation State Planning Regulatory Provisions is an MSES. 4) A habitat for an animal that is endangered wildlife or vulnerable wildlife, or a special least concern animal, is an MSES.	1) All remnant vegetation mapped within the project site is located within a high-risk area mapped for NCA listed terrestrial flora (**Appendix D**). A protected plant survey was undertaken as per the protect plant flora survey guidelines. Five (5) threatened flora species were recorded within 100m of the proposed alignment. ○ *Rhodamnia sessiliflora* (Endangered) ○ *Rhodomyrtus effusa* (Endangered) ○ *Dendrobium nindii* (Endangered) ○ *Myrmecodia beccarii* (Vulnerable) ○ *Acriopsis emarginata* (Vulnerable) An additional species *Randia audasii* (Near Threatened) was located within the clearance impact area. However, it was not considered to be in the wild and is excluded from further assessment. No protected plants are proposed to be directly impacted as a result of the proposal. All recorded plants are outside of the proposed alignment boundary. A Protected Plant Survey (PPS) report has been produced

Matters of State Environmental Significance	Triggers
	concurrent with this EA. An impact management plan will be required to show that the proposal will result in no net loss of individual protected plants. With this proposal a protected plant clearing permit will be required form DESI prior to clearing within 100 m of a protected plant. 2) No portion of the property is located within an area shown as bushland habitat, high value rehabilitation habitat or medium value rehabilitation habitat on the map called 'Map of Assessable Development Area Koala Habitat Values' that applies under the Southeast Queensland Koala Conservation State Planning Regulatory Provisions is a matter of State environmental significance. The property is wholly within the state mapped Koala district C (**Appendix D**). 3) Wildlife Habitat – the alignment constitutes in wildlife habitat under NC Act 1992 for threatened fauna and flora. This includes for the Estuarine Crocodile, Southern Cassowary, Spectacled Flying Fox, Diadem Leaf-nosed Bat, Macleay's Fig Parrot, *Acronychia acuminata* and *Isachne sharpii*. The field survey determined that Spectacled Flying Foxes, Estuarine Crocodiles and Macleay's Fig Parrot do use the project site and that there is reasonable likelihood for Southern Cassowary to utilise this area too. Additional Special Least Concern (SLC) species also occur. Although these species may be vagrants and infrequent visitors to the area (see **Appendix E** for full list of NCA listed threatened species for likelihood of occurrence of the property), they still need to be assessed.

Matters of State Environmental Significance	Triggers
	A financial offset is required for 0.3 ha of Wildlife Habitat.
Protected Areas	
A protected area is an MSES.	There are no protected areas under the NC Act 1992 present within the direct project alignment. A section of the Daintree NP is located to the south of Cape Tribulation Road on the northern side of the Daintree River. No direct impacts to this reserve will occur as a result of the proposal. **As a result, a referral to SARA is not required for this matter**.
Fish Habitat Areas	
An area declared under the *Fisheries Act 1994* to be a fish habitat area is an MSES.	There are no fish habitat areas under the *Fisheries Act 1994* present on the property. **As a result, a referral to SARA is not required for this matter**.
Waterway Providing for Fish Passage	
Any part of a waterway providing for passage of fish is an MSES only if the construction, installation or modification of waterway barrier works carried out under an authority will limit the passage of fish along the waterway.	The proposal is in an area containing waterways (tidal) providing passage for fish that may be considered waterway barrier works. **As a result, determination of the extent and duration of works (dredging, cable works) is required by project hydrologists and engineers in conjunction with DAF**.
Marine Plants	
A marine plant within the meaning of the *Fisheries Act 1994* is an MSES.	Marine Plants under the *Fisheries Act 1994* were recorded on the project site throughout much of the proposed alignment (see **Figure 11**). Examples of this community complied with RE descriptions for RE 7.1.4a and 7.1.1 dominated by *Heritiera littoralis*, *Bruguiera gymnorhiza* and *Sonneratia alba*, as well as stand-alone areas of *Sonneratia* sp., *Hibiscus tiliaceus*, *Acanthus ilicifolius* and the marine grass, *Sporobolus virginicus*. These areas were mostly, not all, below the Highest Astronomical Tide (HAT) line.

Matters of State Environmental Significance	Triggers
	Errors in the mapping of remnant REs on the site have resulted in some areas of marine plants (largely mangrove-dominant areas above the HAT line, including patches of *H. tiliaceus* and *Sporobolus virginicus* – described in Section 4.2) not being mapped. **Figure 11** shows an accurate ground-truthing of all areas of marine plants affected by the project's clearing impacts. In total, 0.4 ha of ground-truthed marine plants are proposed to be cleared as a result of the project. **An offset is required for 0.4 ha (determined from Figure 11) of Marine Plants that are ground-truthed and < HAT line.**
Legally Secured Offset Areas	
A legally secured offset area is an MSES.	There are no legally secured offset areas intersecting the property. **As a result, a referral to SARA is not required for this matter**.

Plate 13. Examples of marine plant communities found throughout the project footprint







6.3 Significant Residual Impact Assessment

An environmental offset condition may be imposed under various State assessment frameworks (such as the NC Act 1992, Sustainable Planning Act 2009 (SPA) and Environmental Protection Act (1994), for an activity prescribed under the Environmental Offsets Act 2014 (EO Act), if the activity will, or is likely to have a significant residual impact (SRI) on a prescribed environmental matter that is an MSES (DSDIP, 2014b). **Appendix G** addresses SRIs for the following NC Act 1992-listed species that were either confirmed present or considered at least a moderate potential to occur within the project site.

Confirmed present during site assessment:

- Spectacled Flying Fox (Endangered)
- Estuarine Crocodile (Vulnerable)
- Macleay's Fig Parrot (Near Threatened)
- Ant Plant (Vulnerable)
- Pale Chandelier Orchid (Vulnerable)
- *Rhodamnia sessiliflora* (Endangered)
- *Rhodomyrtus effusa* (Endangered)
- Blue Antler Orchid (Endangered)

Likely or moderate potential to occur:

- White-throated Needletail (Vulnerable)
- Bennett's Tree-kangaroo (Near Threatened)
- Southern Cassowary (Endangered)
- Large-eared Horseshoe Bat (Vulnerable)
- Diadem Leaf-nosed Bat (Near Threatened)
- Semon's Leaf-nosed Bat (Endangered)

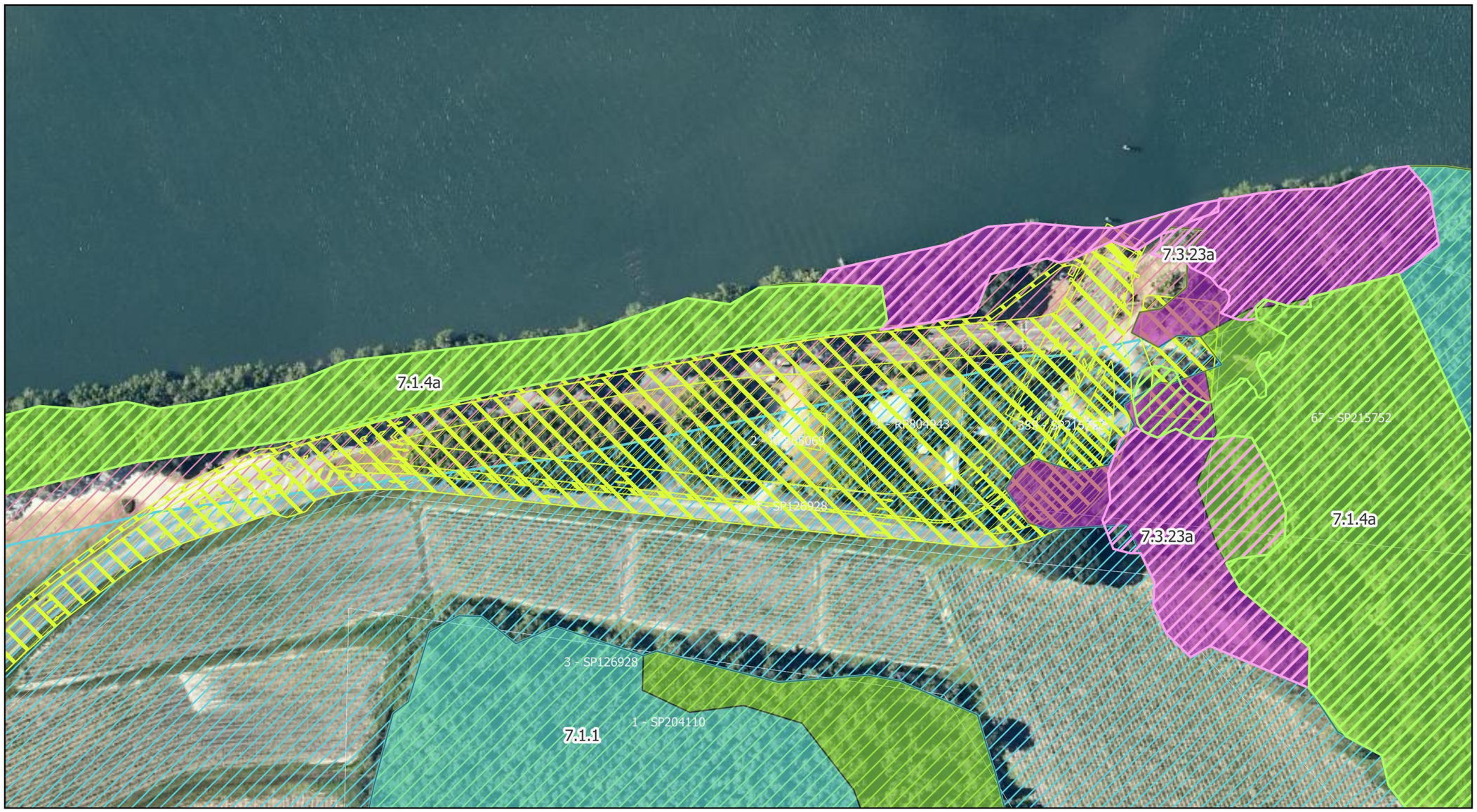


Figure 9. MSES Regulated Cat B and R RE 7.3.23a (TEC) vegetation and Cat B RE 7.1.4a, as mapped by the Queensland Government, vs. ground-truthed mapping

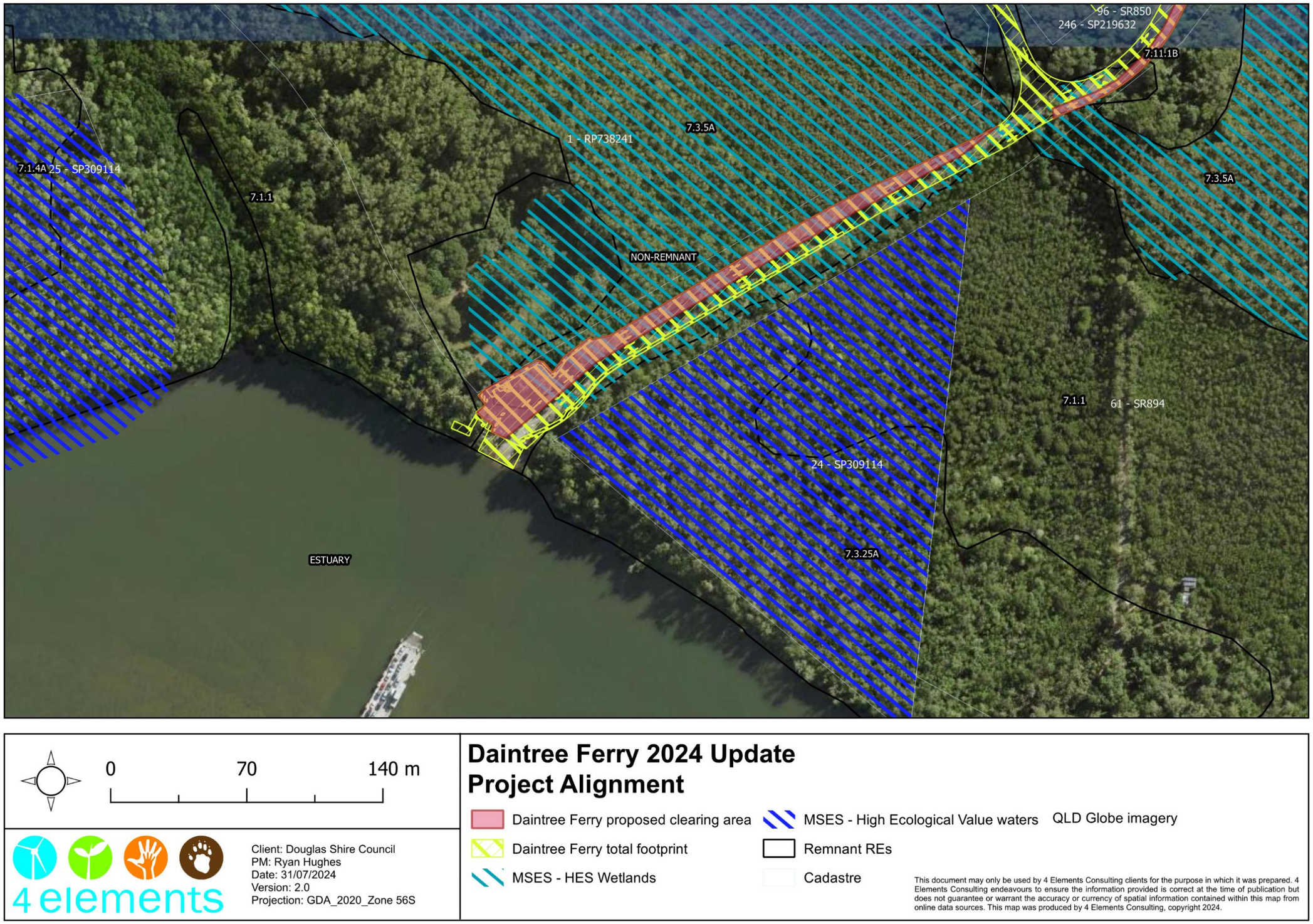


Figure 10. MSES High Ecological Significance (HES) and High Ecological Value waters/wetlands present at the project site

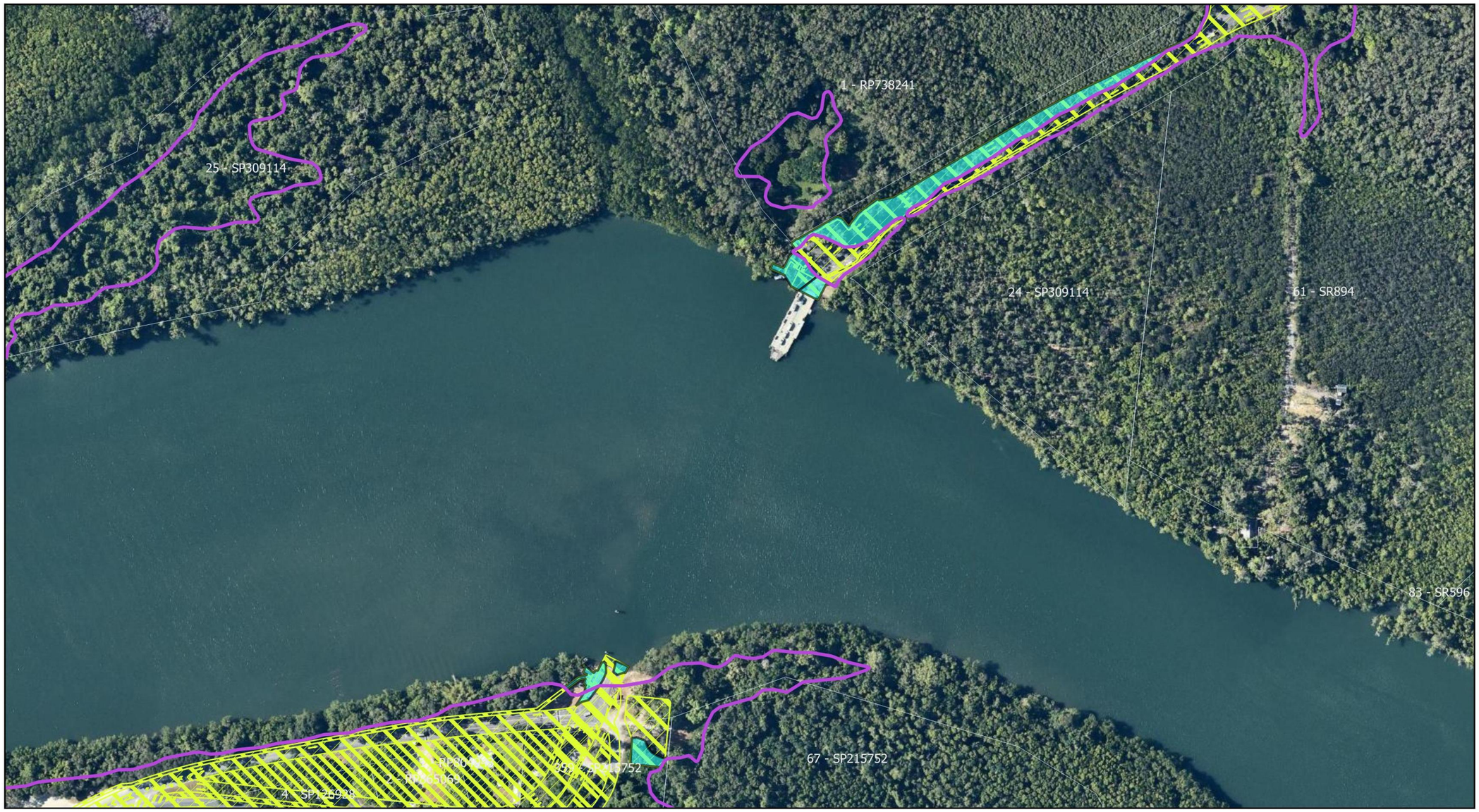


Figure 11. MSES Marine Plants ground-truthed across the project site

6.4 SDAP 8 – Coastal Development and Tidal Works

6.4.1 Coastal Works

The purpose of this code is to ensure that development is designed and located in a way, so as to:

- protect life, buildings and infrastructure from the impacts of coastal erosion
- maintain coastal processes
- conserve coastal resources
- maintain appropriate public use of, and access to and along, state coastal land
- account for the projected impacts of climate change; and
- avoid impacts on MSES, and, where avoidance is not reasonably possible, minimise and mitigate impacts, and provide an offset for significant residual impacts where appropriate.

In addition to the above, the purpose of this code (**Table 10**) is to ensure that development involving operational works which is not assessed by local government is designed and located to protect life and property from the impacts of storm tide inundation.

Table 10. SDAP 8 Coastal Development and Tidal Works

Performance outcomes	Acceptable outcomes	Response
Development in the erosion prone area		
PO1 Development does not occur in the **erosion prone area** unless the development:	No acceptable outcome is prescribed	The proposal is considered to be essential community infrastructure. It is required to increase traffic movement between the river in periods of high demand. It is also needed to reduce congestion of the ferry terminal which impacts resident, tourist, and emergency service access across the river. **As a result, a referral to SARA is not required for this matter**.
1. is one of the following types of development:		
• **coastal-dependent development**; or		
• **temporary, readily relocatable or able to be abandoned**; or		
• **essential community infrastructure**; or		
• **redevelopment** of an existing permanent building or structure		

Performance outcomes	Acceptable outcomes	Response
that cannot be relocated or abandoned; and		
• avoids impacting on **coastal processes**; and cannot feasibly be located elsewhere. 2. is located landward of: • a fit for purpose revetment; or • a proposed revetment that is consistent with: ○ an agreement with a local government; or ii. the alignment of adjacent lawful revetments; or ○ is on a lot less than 2000m^2 where a coastal building line is present		
PO2 Development other than **coastal protection work**: 1. avoids impacting on coastal processes; and 2. ensures that the protective function of landforms and vegetation is maintained. Note: in considering 'reconfiguring a lot applications', the state may require land in the **erosion prone area** to be surrendered to the State for coastal management purposes under the *Coastal Protection and Management Act 1995.* Where the planning chief executive receives a copy of a land surrender requirement or proposed land surrender notice under the *Coastal Protection and Management Act 1995*, this must be considered in assessing the application.	No acceptable outcome is prescribed	1. The development will not impact upon coastal processes. The ferry ramp on both sides of the Daintree River is required to be above the existing natural substrate level. The proposal will maintain current drainage and tidal patterns. The current existing habitat condition and values will be reinstated post construction. 2. The function of the estuarine sediments will be maintained. The constructed ferry ramp on both sides of the Daintree River will be rock armoured to reduce sediment loss. These structures are complex in form and will provide settlement for marine plant propagules to establish post construction. This will further stabilise the adjacent estuarine sediments. Maintenance of this structure will be critical to maintaining the usage of the ferry ramp.

Performance outcomes	Acceptable outcomes	Response
		As a result, a referral to SARA is not required for this matter.
PO3 Development is located, designed, and constructed to minimise the impacts from **coastal erosion** by: 1. locating the development as far landward as practicable; or 2. where it is demonstrated that point 1 is not feasible, mitigate or otherwise accommodate the risks posed by **coastal erosion**.	No acceptable outcome is prescribed	The proposal is **NOT** within the calculated erosion distance. 1. The proposed additional ferry infrastructure has a functional requirement to be on tidal land and cannot be relocated. All ancillary infrastructure associated with the ferry is located above tidal land. **As a result, a referral to SARA is not required for this matter**.
PO4 Development does not significantly increase the risk or impacts to people and property from coastal erosion.	No acceptable outcome is prescribed	The proposal is **NOT** within the calculated erosion distance. Given the stable granite landform that the entire proposal is located within, it is considered unlikely that risks exist to people or property as a result of coastal erosion. The development does not increase risks of coastal erosion. **As a result, a referral to SARA is not required for this matter**.
PO5 Development other than **coastal protection work** avoids directly or indirectly increasing the severity of **coastal erosion** either on or off the site.	No acceptable outcome is prescribed	The development does not increase risks of coastal erosion. **As a result, a referral to SARA is not required for this matter**.
PO6 In areas where a **coastal building line** is present, building work is located landward of the **coastal building line** unless **coastal protection work** has been constructed to protect the development.	No acceptable outcome is prescribed	N/A
Artificial waterways		

Performance outcomes	Acceptable outcomes	Response
PO7 Development of **artificial waterways**, canals and **dry-land marinas** minimises impacts on **coastal resources** by:	No acceptable outcome is prescribed	N/A
1. maintaining the tidal prism volume of the natural waterway to which it is connected		
2. demonstrating a whole-of-life strategy for the disposal of **dredged material**.		
Coastal protection work		
PO8 Works for **beach nourishment** minimise adverse impacts on **coastal processes** and avoid any increase in the severity of erosion on adjacent land by:	No acceptable outcome is prescribed	N/A
1. sourcing sand from an area that does not adversely impact on the active beach system		
2. ensuring imported sand is compatible with natural beach sediments and **coastal processes** of the receiving beach.		
PO9 Erosion control structures are only constructed where there is an imminent threat to buildings or infrastructure of value, and there is no feasible option for either:	No acceptable outcome is prescribed	N/A
1. **beach nourishment**; or		
2. relocation or abandonment of structures.		
Statutory note: the monetary value of buildings or infrastructure should be more than the cost of associated erosion control structures.		

Performance outcomes	Acceptable outcomes	Response
PO10 Erosion control structures minimise interference with **coastal processes**, or any increase to the severity of erosion on adjacent land by:	No acceptable outcome is prescribed	N/A
1. locating the **erosion control structure** as far landward as practicable and directly adjacent to the structure it is intended to protect		
2. where required and feasible, importing sand to the site to mitigate any increase in the severity of erosion		
3. the design of the structure.		
Water quality		
PO11 Development:	No acceptable outcome is prescribed	The development will achieve the water quality objectives of Queensland waters during construction and avoid release of prescribed water contaminants. An Erosion and Sediment Control Plan (ESCP) will be developed to ensure these outcomes are met. Once construction is complete the proposal will maintain present environmental values. **As a result, a referral to SARA is not required for this matter**.
1. maintains or enhances **environmental values** of receiving waters		
2. achieves the **water quality objectives** of Queensland waters		
3. avoids the release of **prescribed water contaminants** to **tidal waters**.		
Note: see Environmental Protection (Water) Policy 2009 for the relevant **water quality objectives**.		
Category C and R areas of vegetation		
PO12 Development:	No acceptable outcome is prescribed	No Category C – High value regrowth vegetation is located within the project site. An area of category R reef regrowth vegetation (mapped as RE 7.3.23a (0.1 ha – approx. 10% of clearing footprint) is located on the existing ferry terminals for both the northern and southern sides of the Daintree River (**Figure 8**). However, ground-truthing of this RE incl. category R indicates no
1. avoids impacts on **category C areas** of vegetation and **category R areas** of vegetation; or		
2. minimises and mitigates impacts on **category C areas** of vegetation and **category R areas** of vegetation after		

Performance outcomes	Acceptable outcomes	Response
demonstrating avoidance is not reasonably possible.		remnant or regrowth areas will be affected by the project. **As a result, a referral to SARA is not required for this matter**.
Public use of and access to state coastal land		
PO13 Development: 1. maintains or enhances public use of, and access to and along **state coastal land** (except where this is contrary to the protection of **coastal resources** or public safety).	No acceptable outcome is prescribed	The nature of the proposal increases public access and use of tidal land, waterways and the fishery present within the locality. **As a result, a referral to SARA is not required for this matter**.
PO14 Private marine development ensures that works: 1. are used for **marine access purposes** only 2. minimise the use of **state coastal land** 3. do not interfere with access between **navigable waterways** and adjacent properties.	No acceptable outcome is prescribed	N/A
PO15 Development ensures **erosion control structures** are located within the premises they are intended to protect unless, there is no feasible alternative.	No acceptable outcome is prescribed.	Erosion control structures will be located subject to the ESCP. **As a result, a referral to SARA is not required for this matter**.
Matters of state environmental significance		
PO16 Development: 1. avoids impacts on **matters of state environmental significance**; or 2. minimises and mitigates impacts on **matters of state environmental**	No acceptable outcome is prescribed	See MSES in above **section 6.2**

Performance outcomes	Acceptable outcomes	Response
significance after demonstrating avoidance is not reasonably possible; and, 3. provides an **offset** if, after demonstrating all reasonable avoidance, minimisation and mitigation measures are undertaken, the development results in an acceptable **significant residual impact** on an **MSES**.		
Private marine development		
PO17 Private marine development does not require the construction of **coastal protection work**, shoreline or riverbank hardening or **dredging** for **marine access purposes**.	No acceptable outcome is prescribed	N/A
Disposal of solid waste or dredged material from artificial waterways		
PO18 Solid waste from land and **dredged material** from **artificial waterways** is not disposed of in **tidal water** unless it is for **beneficial reuse**.	No acceptable outcome is prescribed	N/A
Disposal of dredged material other than from artificial waterways		
PO19 Dredged material is returned to **tidal water** where this is needed to maintain **coastal processes** and sediment volume.	No acceptable outcome is prescribed	N/A
PO20 Where it is not needed to maintain **coastal processes** and sediment volume, the quantity of **dredged material** disposed to **tidal water** is minimised through **beneficial reuse** or disposal on land.	No acceptable outcome is prescribed.	N/A
All dredging and any disposal of dredged material in tidal water		
PO21 All **dredging** and any disposal of **dredged material** in **tidal water** is:		**Determination of the extent and duration of works (dredging, cable works) is**

Performance outcomes	Acceptable outcomes	Response
1. demonstrated to be safe regarding protection of the marine environment and by meeting the National Assessment Guidelines for Dredging 2009, Department of Environment and Energy, 2009, or later version; and	No acceptable outcome is prescribed	**required by project hydrologists and engineers in conjunction with SARA.**
2. supported by a monitoring and management plan that protects the marine environment and that complies with the National Assessment Guidelines for Dredging 2009, Department of Environment and Energy, 2009, or later version.		
Reclamation		
PO22 Development does not involve **reclamation** of land below **tidal water**, other than for the purposes of:		N/A
1. **Coastal-dependent development**, **public marine development** or community infrastructure; or		
2. Strategic ports, priority ports, boat harbours or strategic airports and aviation facilities, in accordance with a statutory land use plan or master plan, where there is a demonstrated net benefit for the state or region and no feasible alternative exists; or	No acceptable outcome is prescribed	
3. **coastal protection work** or work necessary to protect **coastal resources** or **coastal processes**.		
PO23 Works are located and designed such that they continue to operate safely during and following a defined storm tide event.	AO23.1 Tidal work is designed and located in accordance with the Guideline: *Building and engineering*	**The proposal seeks to widen the road infrastructure and increase capacity of the ferry way between the northern and southern sides of the Daintree River. Determination of the operational safety of the works (dredging, cable works) post-sealing in response to storms, is required**

Performance outcomes	Acceptable outcomes	Response
	standards for tidal works - Department of Environment and Heritage Protection, 2017	**by project hydrologists and engineers in conjunction with SARA (ref. SDAP 8).**

6.4.2 Dredging/extraction under the Coastal Management Act 1995

As per authority number MPW2014/GBRC0016-1, dredging of the Daintree River at the Daintree Ferry crossing channel is permitted by the State Government up to a volume of 10,000m^3 per year over the validity period of the authority (5 July 2024 – 4 July 2034). This dredging is for the maintenance of a navigable and safe channel of crossing for the Daintree Ferry, with sand dredged from the program deposited as part of beach replenishment works at the Rocky Point boat ramp at Rocky Point (northeast of Mossman and approximately 12km southeast of the Daintree Ferry crossing). Douglas Shire Council would like to request an update of this authority to increase the permitted volume of dredging to 20,000m^3 due to the extra width of the new vessel. Currently the 10,000m^3 maximum is close to what is removed annually. The current vessel is 12m wide and the new vessel will be 16m wide.

As a result, an update to authority MPW2014/GBRC0016-1 is required for this matter.

6.4.3 State Code 9: Great Barrier Reef Wetland Protection Areas

The purpose of this code is to ensure that development involving high impact earthworks in a wetland protection area:

- is located outside of a wetland
- does not have an unacceptable impact on wetland environmental values
- is designed and located to avoid impacts or, where MSES cannot be reasonably avoided, impacts are reasonably minimised and mitigated
- does not result in a significant residual impact on an MSES unless the significant residual impact is acceptable, and an offset is provided.

Table 11 sets out this code in relation to the project.

Table 11 SDAP 9 Great Barrier Reef Wetland Protection Areas

Performance outcomes	Acceptable outcomes	Comment
General		
PO2 Development is not carried out in a wetland in a wetland protection area.	No acceptable outcome is prescribed	No portion of the southern alignment is located within a wetland protection area. The alignment on the northern side of the project site is mostly located within a wetland protection area (wetlands of high ecological significance – HES wetland). This occurs on the northwest side of Cape Tribulation Road on the northern side of the Daintree River. An area of 0.24 ha is proposed to be cleared for widening the built road alignment there (see **Figure 8**). As per a SARA pre-lodgement meeting record (Ref # 2111-25845 SPL – 22 November 2021), if there is no significant change to the hydrology of the northern side of the Daintree River adjacent to the HES wetland resulting from the proposed clearing alignment, then there is no requirement for a referral. A hydrological study is recommended to determine this. **A financial offset is required for 0.24 ha of HES Wetland**.
Hydrology		
PO3 Development maintains or improves the existing surface and groundwater hydrology in a wetland protection area.	No acceptable outcome is prescribed	**The current alignment is predicted to maintain or improve the existing surface and groundwater hydrology in the wetland protection area, but this requires discussion between project hydrologists and engineers in conjunction with SARA. Forthcoming hydrology reports, final engineering designs and acid-sulphate soils documentation are required.**
Water Quality		
PO4 Development does not unacceptably impact the water quality of the wetland	No acceptable outcome is prescribed	**The current alignment is predicted to maintain or improve the existing water quality in the wetland protection area and buffer, but this**

Performance outcomes	Acceptable outcomes	Comment
General		
in the wetland protection area and in the wetland buffer.		**requires discussion between project hydrologists and engineers in conjunction with SARA. Forthcoming hydrology reports, final engineering designs and acid-sulphate soils documentation are required.**
PO5 Development does not use the wetland in the wetland protection area for stormwater treatment.	No acceptable outcome is prescribed	**The current alignment will not use the wetland protection area for stormwater treatment, but this requires discussion between project hydrologists and engineers in conjunction with SARA. Forthcoming hydrology reports, final engineering designs and acid-sulphate soils documentation are required.**
Land Degradation		
PO6 Development is located and designed to protect the wetland protection area from land degradation	No acceptable outcome is prescribed	**The current alignment will not use the wetland protection area for stormwater treatment, but this requires discussion between project hydrologists and engineers in conjunction with SARA. Forthcoming hydrology reports, final engineering designs and acid-sulphate soils documentation are required.**
Fauna Management		
PO7 Development protects wetland fauna from any impacts associated with noise, light or visual disturbance.	No acceptable outcome is prescribed	The current alignment is predicted to protect wetland fauna from impacts such as noise, light and visual disturbances. Construction will require an Environment Management Plan (EMP) which will dictate (among other parameters): that all works will take place during daylight hours, therefore not requiring artificial lighting, noise will be restricted to during the day, on the existing thoroughfare (Cape Tribulation Road) with only short-term noise increases during construction. No permanent change in visual disturbances is predicted. No new street or facility lighting will be installed. **As a result, a referral to SARA is not required for this matter**.

Performance outcomes	Acceptable outcomes	Comment
General		
PO8 Development protects the movement of wetland fauna within and through a wetland protection area	No acceptable outcome is prescribed	**The current alignment is predicted to protect the movement of wetland fauna within and through a wetland protection area, but this requires discussion between project hydrologists and engineers in conjunction with SARA.**
PO9 Development does not introduce pest plants, pest animals or exotic species into a wetland and its buffer.	No acceptable outcome is prescribed	**The current alignment is predicted to protect wetland fauna from pests, but this requires a weed management plan (WMP).**
Matters of State Environmental Significance		
PO10 Development outside the wetland is designed and sited to: a) avoid impacts on matters of state environmental significance; or b) minimise and mitigate impacts on matters of state environmental significance after demonstrating avoidance is not reasonably possible; and c) provide an offset if, after demonstrating all reasonable avoidance, minimisation and mitigation measures are undertaken, the development results in an acceptable significant residual impact on a matter of state environmental significance.	No acceptable outcome is prescribed	1) A single Endangered RE is located within the project site (RE 7.3.23a). A total of 0.11 ha of this community are mapped within the proposal. However, despite the mapping, none of this area constitutes this RE on-ground. The proposal is seeking to develop only pre-cleared areas within mapped RE 7.3.23a. 2) A portion of the project site is located within an area shown as a High Ecological Significance (HES) wetland on the vegetation management wetlands map. This occurs on the northwest side of Cape Tribulation Road on the northern side of the Daintree River. An area of 0.24 ha is proposed to be cleared for widening the built road alignment (see **Figure 8**). As per a SARA pre-lodgement meeting record (Ref # 2111-25845 SPL – 22 November 2021), if there is no significant change to the hydrology of the northern side of the Daintree River adjacent to the HES wetland resulting from the proposed clearing alignment, then there is no requirement for a referral. A hydrological study is recommended to determine this. 3) All remnant vegetation within the project site is located within an area shown as Essential Habitat for an animal or plant that is endangered or vulnerable wildlife. The proposal requires the

Performance outcomes	Acceptable outcomes	Comment
General		
		clearance of essential habitat (0.3 ha) listed under the VM Act 1999 (Figure 11). This is mapped for the Estuarine Crocodile, Southern Cassowary, Spectacled Flying Fox, Diadem Leaf-nosed Bat, Macleay's Fig Parrot, *Acronychia acuminata and Isachne sharpii.* The field survey determined that Spectacled Flying Foxes, Estuarine Crocodiles and Macleay's Fig Parrot do use the project site and that there is reasonable likelihood for Southern Cassowary to utilise this area too. 4) All remnant vegetation mapped within the project site is located within a high-risk area mapped for NCA listed terrestrial flora (Appendix D). A protected plant survey was undertaken as per the protect plant flora survey guidelines. Five (5) threatened flora species were recorded within 100m of the proposed alignment. o *Rhodamnia sessiliflora* (Endangered) o *Myrmecodia beccarii* (Vulnerable) o *Acriopsis emarginata* (Vulnerable) o *Rhodomyrtus effusa* (Endangered) o *Dendrobium nindii* (Endangered) An additional species *Randia audasii* (Near Threatened) was located within the clearance impact area. However, it was not considered to be in the wild and is excluded from further assessment. No protected plants are proposed to be directly impacted as a result of the proposal. All recorded plants are outside of the proposed alignment boundary. 5) Marine plants under the Fisheries Act 1994 were recorded on the project site throughout much of the proposed alignment (see **Figure 11**). Errors in the mapping of remnant REs on the site have resulted in some areas of marine plants (largely mangrove-dominant areas above the highest astronomical tide (HAT) line – described in **Section 4.2**) not being mapped. In total,

Performance outcomes	Acceptable outcomes	Comment
General		
		including both mapped and unmapped, ground-truthed marine plants, 0.4 ha of marine plants are proposed to be cleared as a result of the project. **A financial offset is required for 0.02 ha of Of Concern RE 7.1.4a.** **A financial offset is required for 0.24 ha of HES Wetland.** **A financial offset is required for 0.3 ha of Essential Habitat.** **A financial offset is required for 0.3 ha of Wildlife Habitat.** **A financial offset is required for 0.4 ha (determined from Figure 11) of Marine Plants**

6.4.4 State Code 11: Removal, destruction or damage of marine plants

The purpose of this code is to ensure that development which involves the removal, destruction or damage of marine plants and fish habitat:

- maintains the extent, distribution, diversity and condition of marine plant communities and protects the ecological functions to which they contribute
- maintains the health and productivity of fisheries resources and fish habitat
- minimises impacts on the management, use, development and protection of fisheries resources and fish habitat
- is designed and located to avoid impacts or, where the matters of state environmental significance cannot be reasonably avoided, impacts are reasonably minimised and mitigated
- does not result in a significant residual impact on a matter of state environmental significance unless the significant residual impact is acceptable, and an offset is provided.

Information obtained from desktop analysis and site surveys has provided a response to the relevant section of State Code 11 of the SDAP (**Table 12**) below.

Table 12. State Code 11: Removal, destruction or damage of Marine Plants

Performance outcomes	Acceptable outcomes	Comment
All Developments – Impacts to Marine Plants		

Performance outcomes	Acceptable outcomes	Comment
PO1 The design, construction and maintenance of the development does not result in adverse impacts to marine plants and fish habitat.	No acceptable outcome is prescribed	The Daintree River ferry duplication works for the Douglas Shire Council will disturb an area of up to 0.4 ha of Marine Plant vegetation. The works cannot be relocated or avoid an impact to these plants and are required for improving residential and tourist access across the Daintree River. **A financial offset is required for 0.4 ha of Marine Plants**
PO2 Development is designed, constructed, and maintained to avoid and minimise impacts on matters of state environmental significance.	No acceptable outcome is prescribed	The proposal will destroy Marine Plants only where strictly necessary. Both HES wetlands and regulated vegetation within 100m of a wetland occur at or near the proposed works.
PO3 Where development impacts on matters of state environmental significance, development mitigates impacts and provides an offset for any acceptable significant residual impact on matters of state environmental significance.	No acceptable outcome is prescribed	**A financial offset is required for 0.4 ha of Marine Plants**
All Development In General		
PO4 Aspects of development are only permitted on tidal land where there is a functional requirement, and the development cannot be feasibly located elsewhere. Ancillary elements (such as rest rooms and offices) are to be located outside of tidal land.	No acceptable outcome is prescribed	The proposed additional ferry infrastructure has a functional requirement to be on tidal land and cannot be relocated. All ancillary infrastructure associated with the ferry is located above tidal land. **As a result, a referral to SARA is not required for this matter**.
PO5 The development does not result in adverse impacts on fish movement or fragmentation of fish habitats.	No acceptable outcome is prescribed	The destruction of 0.4 ha of marine plants is required. The proposal is designed so that all clearing of marine plants occurs directly adjacent to existing infrastructure

Performance outcomes	Acceptable outcomes	Comment
		which prevents fragmentation of fish habitats. A financial offset will be provided for the destruction of marine plants. Adverse impacts to fish habitats are not anticipated. **A financial offset is required for 0.4 ha of Marine Plants**
PO6 The design, construction and maintenance of the development does not result in adverse impacts on fisheries resources.	No acceptable outcome is prescribed	The destruction of 0.4 ha of marine plants is required. The proposal is designed so that all clearing of marine plants occurs directly adjacent to existing infrastructure which prevents fragmentation of fish habitats. A financial offset will be provided for the destruction of marine plants. Adverse impacts to fisheries resources are not anticipated. **A financial offset is required for 0.4 ha of Marine Plants**
PO7 The development is designed, constructed, and maintained to encourage fish habitats and fisheries resource values to naturally regenerate.	No acceptable outcome is prescribed	The final constructed ferry ramp on both the northern and southern side of the Daintree River will be rock armoured. This material is complex in structure and allows for the settlement of sessile marine invertebrates and marine plants propagules. **As a result, a referral to SARA is not required for this matter**.
PO8 Development likely to cause drainage or disturbance to acid sulphate soils, prevents the release of contaminants, and impacts on fisheries resources and fish habitats.	No acceptable outcome is prescribed	Given the nature of the site containing marine plants, it is considered very likely that acid sulphate soils are present is the disturbance area associated with the proposed works. An acid sulphate

Performance outcomes	Acceptable outcomes	Comment
		soils assessment will be undertaken to inform appropriate management. An acid sulphate soils management plan to prevent the release of contaminants because of works. **As a result, a referral to SARA is not required for this matter**.
PO9 The development maintains or restores drainage patterns, the extent and timing of tidal and freshwater inundation.	For bridges: AO9.1 Bridges are designed with abutments above the highest astronomical tide (HAT line), and; For water, sewer or stormwater infrastructure: o AO9.2 Infrastructure is placed below the existing natural substrate surface level, and natural substrate, surface levels and habitat condition and values are reinstated. For any other development, no acceptable outcome is prescribed.	The ferry ramp is required to be above the existing natural substrate level. The proposal will maintain current drainage and tidal patterns. The current existing habitat condition and values will be reinstated post construction. **As a result, a referral to SARA is not required for this matter**.
PO10 The design, construction and maintenance of the development maintains natural erosion and accretion processes.	No acceptable outcome is prescribed	The design of the project has been delivered with the specific aim of maintaining current natural erosion and accretion levels. The rock armouring of the ferry ramps on both sides of the Daintree River will maintain current natural erosion and accretion processes will be maintained because of the proposal.

Performance outcomes	Acceptable outcomes	Comment
		As a result, a referral to SARA is not required for this matter.
PO11 The development is designed, constructed, and maintained so that it does not increase the risk of scour or erosion of waterway bed or banks.	No acceptable outcome is prescribed	The design of the project has been delivered with the specific aim of maintaining current natural erosion and accretion levels. The rock armouring of the ferry ramps on both sides of the Daintree River will not increase current risk of scour or erosion to the waterway. **As a result, a referral to SARA is not required for this matter**.
PO12 The development is designed, constructed, and maintained so that it does not increase the risk of shoreline or foreshore erosion.	No acceptable outcome is prescribed.	The project is located further than ~ 8.5 km from the mouth of the Daintree River. This project does not pose any foreseeable risk to shoreline or foreshore erosion. **As a result, a referral to SARA is not required for this matter**.
PO13 Development does not have an adverse impact on public use of or access to tidal land and waterways.	For development for a material change of use or reconfiguration of a lot: AO13.1 Tidal land and fish habitats are separated from development and are available for public use. For any other development, no acceptable outcome is prescribed.	The nature of the proposal increases public access and use of tidal land, waterways and the fishery present within the locality. **As a result, a referral to SARA is not required for this matter**.
PO14 Development does not adversely impact on community access to fisheries resources and fish habitats including recreational and indigenous fishing access.	AO14.1 The development does not alter existing infrastructure or existing community access arrangements.	The proposal will maintain public access to fisheries and fishery resources including for recreational fishing including by traditional owners.

Performance outcomes	Acceptable outcomes	Comment
		As a result, a referral to SARA is not required for this matter.
PO15 Development does not adversely impact on commercial fishing access and linkages between a commercial fishery and infrastructure, services, and facilities.	No acceptable outcome is prescribed	The existing ferry operations permit commercial and public vessels to access the Daintree River via the cabled ferry crossing path. The duplication of this cable ferry infrastructure will maintain this existing access along the Daintree River. **As a result, a referral to SARA is not required for this matter**.
Temporary works		
PO22 Temporary works are designed, constructed and maintained to be in place for the shortest possible time or are undertaken for a specified period.	No acceptable outcome is prescribed	All temporary works and access will be located above the highest astronomical tide and decommissioned at the completion of works. Passive rehabilitation will be undertaken on the completed rock armouring of the ferry ramps. These will be monitored post works to determine if there is any need to intervene with natural recruitment of marine plants to the site. **As a result, a referral to SARA is not required for this matter**.
PO23 A temporary structure is in place for a specified period and is designed to be completely removed and fish habitat is restored to pre-existing or improved condition on completion.	No acceptable outcome is prescribed	All temporary works and access will be located above the highest astronomical tide and decommissioned at the completion of works. **As a result, a referral to SARA is not required for this matter**.
Restoration		
PO24 Restoration works do not result in substitution of fish habitats, adverse	No acceptable outcome is prescribed	Restoration works will not result in substitution of fish habitats, adverse

Performance outcomes	Acceptable outcomes	Comment
impacts to the condition of fish habitats or fisheries productivity.		impacts to fish habitats or fisheries productivity. A passive rehabilitation method will monitor the ferry ramp rock armouring post construction to determine if there is any need to intervene with natural recruitment of marine plants to the site. **As a result, a referral to SARA is not required for this matter**.
PO25 Marine plants to be used for revegetation purposes have local provenance.	No acceptable outcome is prescribed	It is anticipated that the rock armouring will naturally recruit marine plant propagules from directly adjacent marine plant communities. If after monitoring of the site it is determined that passive rehabilitation is not effective, any marine plants used for revegetation works, will have local provenance. **As a result, a referral to SARA is not required for this matter**.

6.4.5 State Code 16: Public Safety and Relevant Infrastructure Activities

The purpose of this code is to ensure development avoids clearing, or where avoidance is not reasonably possible, minimises clearing to conserve vegetation. The key aims are to:

- avoid land degradation
- avoid the loss of biodiversity
- maintain ecological processes
- minimise contributions to greenhouse gas emissions (GHGs)

For vegetation retention purposes, are to:

- undertake works in a manner that retains or regenerates vegetation by sustainably managing the impacts of the clearing on REs, biodiversity and ecological processes over time
- undertake works consistent with any notice requiring compliance on the land subject to the development application unless a better environmental outcome can be achieved
- undertake works consistent with vegetation management requirements for particular areas unless a better environmental outcome can be achieved
- avoid impacts on vegetation and minimise and mitigate impacts on vegetation where avoidance is not possible
- not result in a significant residual impact on an MSES unless the impact is acceptable, and an offset is provided (where appropriate). An offset is not appropriate for acceptable significant residual impacts on a connectivity area unless the clearing is done for development that is a coordinated project, natural channel diversion or for contaminants removal.

Information obtained from desktop analysis and site surveys has provided a response to the relevant section of State Code 16 of the SDAP (**Table 13**) below

Table 13. State Code 16: Public safety and relevant infrastructure activities

Performance outcomes	Acceptable outcomes	Comment
16.2 - General		
PO1 Clearing of vegetation is consistent with any notice requiring compliance on the land subject to the development application, unless a better environmental outcome can be achieved.	No acceptable outcome is prescribed	No compliance notices are present for any portion of the project site. **As a result, a referral to SARA is not required for this matter**.
PO2 Clearing of vegetation is consistent with vegetation management requirements for particular regulated areas unless a better environmental outcome can be achieved.	No acceptable outcome is prescribed	The proposal is not consistent with vegetation management requirements for regulated areas. **As a result, a referral to SARA is not required for this matter**.
PO3 Clearing of vegetation in a legally secured offset area: 1. is consistent with the offset delivery plan; or 2. is consistent with an agreement for the offset area on the land subject to the development application; or 3. only occurs if an additional offset is provided.	No acceptable outcome is prescribed	No portion of the project site is located within a legally secured offset area. **As a result, a referral to SARA is not required for this matter**.

16.3 Public Safety, Relevant Infrastructure Activities and / or Consequential Development of IPA Approval
Clearing avoids and minimises impacts

16.3 Public Safety, Relevant Infrastructure Activities and / or Consequential Development of IPA Approval		
PO4 Clearing of vegetation and adverse impacts of clearing vegetation do not occur unless the application has demonstrated that the clearing and the adverse impacts of clearing have been: 1. reasonably avoided; or 2. reasonably minimised where it cannot be reasonably avoided.	No acceptable outcome is prescribed	The proposal is considered to be essential community infrastructure. It is required to increase traffic movement between the river in periods of high demand. It is also needed to reduce congestion of the ferry terminal which impacts resident, tourist, and emergency service access across the river. **As a result, a referral to SARA is not required for this matter**.
Clearing associated with wetlands		
PO81 Clearing of vegetation within a natural wetland and/or within 100 metres of the defining bank of a natural wetland maintains the composition, structure and function of any regional ecosystem associated with any natural wetland to protect all of the following: 1. bank stability by protecting against bank erosion; 2. water quality by filtering sediments, nutrients and other pollutants; 3. aquatic habitat; 4. terrestrial habitat.	AO81.1 Clearing does not occur in a natural wetland or within 100 metres of the defining bank of any natural wetland. OR AO81.2 Clearing within 100 metres of the defining bank of any natural wetland: 1. does not occur within 10 metres of the defining bank of any natural wetland; and 2. does not exceed widths in reference table 1 in this code.	Vegetation clearing is required clearance within a natural wetland or within 100 m of a defining bank of any natural wetland. The entire northern bank of the Daintree River occurs within a wetland protection area. A total of 0.24 ha of this MSES will be cleared as a result of the proposal. i. The northern section of the project alignment occurs within an area of HES wetlands shown on the map of referable wetlands. A total of 0.24 ha of this MSES is required to be cleared as a result of the proposal. ii. As per a SARA pre-lodgement meeting record (Ref # 2111-25845 SPL – 22 November 2021), if there is no significant change to the hydrology of the northern side of the Daintree River adjacent to the

16.3 Public Safety, Relevant Infrastructure Activities and / or Consequential Development of IPA Approval		
		HES wetland resulting from the proposed clearing alignment, then there is no requirement for a referral. A hydrological study is recommended to determine this. **A financial offset is required for 0.24 ha of HES Wetland**.
PO82 Where clearing of vegetation in a regional ecosystem associated with a natural wetland does not maintain the composition, structure and function of the regional ecosystem, and cannot be avoided and has been mitigated, an offset is provided for any acceptable significant residual impact.	No acceptable outcome is prescribed	Vegetation clearing for the project site requires vegetation clearance within an RE associated with a natural wetland. As above for PO81. **A financial offset is required for 0.24 ha of HES Wetland**.
Clearing associated with watercourse and drainage feature		
PO83 Clearing of vegetation within a watercourse and /or drainage feature and/or within the relevant distance (listed in reference table 2) of a watercourse and/or drainage feature, maintains the composition, structure and function of the regional ecosystem associated with the watercourse and/or drainage feature to protect all of the following: 1. bank stability by protecting against bank erosion;	AO83.1 Clearing does not occur in any of the following areas: 1. inside the defining bank of a watercourse or drainage feature; and 2. within the relevant distance of the defining bank of any watercourse or drainage feature in reference table 2 of this code. OR AO83.2 Clearing within any watercourse or drainage feature, or	**AO83.1** 1. A mapped watercourse is present within the northern portion of the proposed clearing area. 2. Vegetation clearing is proposed within relevant distance of the defining bank of any watercourse or drainage feature. As above for PO81. **A financial offset is required for 0.24 ha of HES Wetland**.

16.3 Public Safety, Relevant Infrastructure Activities and / or Consequential Development of IPA Approval		
2. water quality by filtering sediments, nutrients and other pollutants; 3. aquatic habitat; 4. terrestrial habitat.	within the relevant distance of the defining bank of any watercourse or drainage feature in reference table 2 of this code: 1. does not exceed the widths in table reference table 1 of this code; and 2. does not occur within 10 metres of the defining bank, unless clearing is required into or across the watercourse or drainage feature.	
PO84 Where clearing of vegetation in a regional ecosystem associated with a watercourse and/or drainage feature does not maintain the composition, structure and function of the regional ecosystem, and cannot be avoided and has been mitigated, an offset is provided for any acceptable significant residual impact	No acceptable outcome is prescribed	A mapped watercourse is present within the northern portion of the proposed clearing areas. As above for PO81. **A financial offset is required for 0.24 ha of HES Wetland**.
Connectivity		
PO85 Regional ecosystems on the subject land and any adjacent land, retain sufficient vegetation to maintain: 1. ecological processes; and	No acceptable outcome is prescribed	The design of the project site has sought to clear within previously cleared non-remnant vegetation and adjacent to existing road and urban infrastructure as far as practical. The ecological processes of the adjoining vegetation will be maintained as a result. As a result, the regional ecosystem will remain

16.3 Public Safety, Relevant Infrastructure Activities and / or Consequential Development of IPA Approval		
2. ensure the regional ecosystem remains in the landscape despite threatening processes.		within the landscape despite the clearance of vegetation (threatening process). **As a result, a referral to SARA is not required for this matter**.
Soil Erosion if the local government is not the assessment manager for the development application		
PO86 Clearing does not result in accelerated soil erosion within or outside the land the subject of the development application.	AO86.1 Clearing only occurs if an erosion and sediment control plan is developed and implemented to prevent soil erosion and instability resulting from the clearing.	An erosion and sediment control plan will be required to be implemented prior to the commencement of construction. **As a result, a referral to SARA is not required for this matter**.
Salinity		
PO87 Clearing within 100 metres of a salinity expression area does not contribute to or accelerate land degradation through either of the following: 1. waterlogging; 2. the salinisation of groundwater, surface water or soil.	AO87.1 Clearing does not occur within 100 metres of a salinity expression area.	No salinity expression areas, either primary or secondary, were recorded within the project site. No vegetation clearing will occur within 100 m of a salinity expression area.
Conserving endangered or of concern regional ecosystems		
PO88 Clearing of vegetation maintains the composition, structure and function of Endangered regional ecosystems and/or Of Concern regional ecosystems.	AO88.1 Clearing does not occur in an endangered regional ecosystem or an of concern regional ecosystem. OR	Vegetation clearing avoids Endangered but affects 0.02 ha of Of Concern vegetation as mapped pursuant with the VM Act 1999.

16.3 Public Safety, Relevant Infrastructure Activities and / or Consequential Development of IPA Approval		
	AO88.2 Total clearing of endangered regional ecosystems and of concern regional ecosystems combined does not exceed the widths prescribed in reference table 1 of this code. OR AO88.3 Total clearing of endangered regional ecosystems and of concern regional ecosystems combined does not exceed areas prescribed in reference table 1 of this code.	The regulated vegetation mapping shows that much of the proposed clearing area (0.93 ha) is within Least Concern Category B remnant vegetation (RE 7.3.5a) or within previously cleared high-value Category R regrowth or Category B vegetation (7.3.23a) in a heavily degraded state and includes current dwellings, existing road infrastructure and exotic or landscaped plantings. In this light, the areas mapped as RE 7.3.23a are not regarded as comprising Endangered RE remnant status. As per Reference Table 1 of SDAP 16, with a clearing of < 10 m width and < 0.5 ha, total clearing does not exceed AO88.3. **A financial offset <u>is required</u> for 0.02 ha of Of Concern RE 7.1.4a.**
PO89 Where clearing of vegetation in an endangered regional ecosystem or an of concern regional ecosystems does not maintain the composition, structure and function of the regional ecosystem, and cannot be avoided and has been mitigated, the cleared area: 1. is rehabilitated; or 2. where the cleared area cannot be rehabilitated, an offset is provided for any acceptable significant residual impact.	No acceptable outcome is prescribed	No significant residual impact in clearing (Least Concern RE 7.3.5a, and degraded Cat R 7.3.23a). The regulated vegetation mapping shows that much of the entire proposed clearing area (0.93 ha) is within Least Concern Category B remnant vegetation (RE 7.3.5a) or within previously cleared high-value Category R regrowth or Category B vegetation (7.3.23a) in a heavily degraded state and includes current dwellings, existing road infrastructure and exotic or landscaped plantings. In this light, the areas mapped as RE 7.3.23a are not regarded as comprising Endangered RE remnant status. A small area of Of Concern RE 7.1.4a

16.3 Public Safety, Relevant Infrastructure Activities and / or Consequential Development of IPA Approval		
		is to be affected by the proposed spoil storage area. As per Reference Table 1 of SDAP 16, with a clearing of < 10 m width and < 0.5 ha, total clearing does not exceed AO88.3. **A financial offset is required for 0.02 ha of Of Concern RE 7.1.4a.**
Essential habitat excluding essential habitat for *Phascolarctos cinereus* (koalas) if development is assessable under Schedule 10 of the Planning Regulation 2017		
PO90 Clearing of vegetation in a regional ecosystem that is an area of essential habitat maintains the composition, structure and function of the regional ecosystem for each protected wildlife species individually.	AO90.1 Clearing does not occur in essential habitat. OR AO90.2 Clearing in essential habitat does not exceed the widths prescribed in reference table 1 of this code. OR AO90.3 Clearing in essential habitat does not exceed the areas prescribed in reference table 1 of this code	**Figure 12** provides an outline of the observed essential habitat on-site. All remnant vegetation within the project site is located within an area shown as Essential Habitat for an animal or plant that is endangered or vulnerable wildlife. The proposal requires the clearance of essential habitat (0.3 ha) listed under the VM Act 1999 (**Figure 12**). This is mapped for the Estuarine Crocodile, Southern Cassowary, Spectacled Flying Fox, Diadem Leaf-nosed Bat, Macleay's Fig Parrot, *Acronychia acuminata* and *Isachne sharpii*. The field survey determined that Spectacled Flying Foxes, Estuarine Crocodiles and Macleay's Fig Parrot do use the project site and that there is reasonable likelihood for Southern Cassowary to utilise this area too. **A financial offset is required for 0.3 ha of Essential Habitat.**
PO91 Where clearing of vegetation in a regional ecosystem that is an area of essential	No acceptable outcome is prescribed	**Figure 12** provides an outline of the observed essential habitat on-site.

16.3 Public Safety, Relevant Infrastructure Activities and / or Consequential Development of IPA Approval		
habitat does not maintain the composition, structure and function of the regional ecosystem, and cannot be avoided and has been mitigated, an offset is provided for any acceptable significant residual impact for each protected wildlife species individually.		All remnant vegetation within the project site is located within an area shown as Essential Habitat for an animal or plant that is endangered or vulnerable wildlife. The proposal requires the clearance of essential habitat (0.3 ha) listed under the VM Act 1999 (**Figure 11**). This is mapped for the Estuarine Crocodile, Southern Cassowary, Spectacled Flying Fox, Diadem Leaf-nosed Bat, Macleay's Fig Parrot, *Acronychia acuminata* and *Isachne sharpii*. The field survey determined that Spectacled Flying Foxes, Estuarine Crocodiles and Macleay's Fig Parrot do use the project site and that there is reasonable likelihood for Southern Cassowary to utilise this area too. **A financial offset is required for 0.3 ha of Essential Habitat.**
Acid sulphate soils if the local government is not the assessment manager for the development application		
PO92 Clearing does not result in, or accelerate, disturbance of acid sulphate soils or changes to the hydrology of the location that will result in either of the following: 1. aeration of horizons containing iron sulphides 2. mobilisation of acid or metals.	AO92.1 Clearing does not occur in Land Zone 1, 2, or 3. OR; AO92.2 Clearing in Land Zone 1, 2, or 3 in areas below the 5 metre Australian Height Datum (AHD) only occurs where: 1. mechanical clearing does not disturb the soil to a depth greater than 30 centimetres; and	Vegetation clearing is taking place within the project site overlaps with Land Zones 1, and 3. **Therefore, an acid sulphate soil management plan will be required to ensure that residual impacts from acid sulphate soil exposure are prevented**.

16.3 Public Safety, Relevant Infrastructure Activities and / or Consequential Development of IPA Approval		
	2. acid sulfate soils are managed consistent with the Queensland Acid Sulfate Soil Technical Manual.	

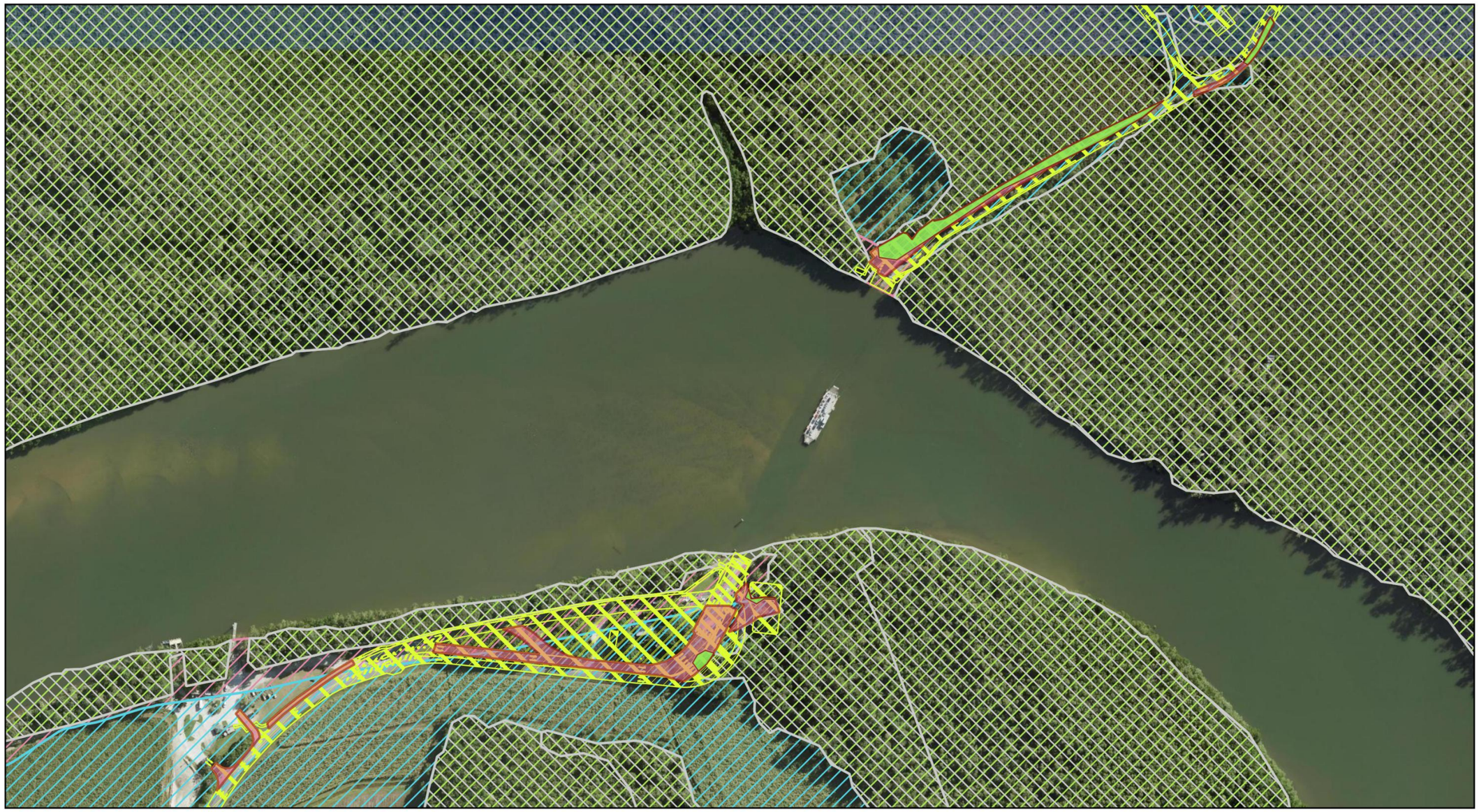


Figure 12. Mapped and ground-truthed essential habitat at the project site

7.0 Recommendations

7.1 Clearing to Minimum Required

All approved clearing areas must be clearly delineated by a registered surveyor prior the commencement of vegetation clearing. Clearing and earthworks is to avoid damage to root zones of the retained trees. Therefore, no parking of vehicles or storage of construction material is permitted under any retained trees. A vehicle parking and laydown area should be provided outside of vegetation areas and clearly communicated to contractors prior to the commencement of works.

7.2 Disposal of Cleared Vegetation

Cleared vegetation should be mulched on site by the clearing contractors and either taken to a licenced landfill or put aside and re-spread over the disturbed soils post works. The latter option is recommended as it will assist in prevention of erosion and the establishment of weeds within any rehabilitation areas. Any woody or herbaceous weeds removed during the clearing phase should be taken to a licenced landfill facility and not mulched with other native vegetation.

7.3 Weed Control

Disturbance of the project site soil has the potential to encourage weed invasion. Currently the weed incursion present within the edge of the existing clearing area is restricted along the roadsides. All light and heavy vehicles should arrive clean to the site prior to commencement of works. The delineation of the project footprint will prevent machinery from entering retained vegetation and reduce weed spread.

As per the accompanying Protected Plant Survey – Impact Management Plan (PPS IMP) associated with this project, it is strongly recommended that weeds are managed on-site, and that treatment for removal of species is prioritised as part of the works. Of highest concern are Singapore Daisy (*Sphagneticola trilobata*), observed in areas around the fringes of vine forest and mangroves, and Pond Apple (*Annona glabra*) which was found in at location – 16.26142, 145.39824 growing on the edge of clearing adjacent RE 7.1.4a. These species should be targeted for eradication from the project area. Photos of both species are provided in **Plate 14**.

Measures should be taken to inhibit the establishment of weeds following construction work. This will require appropriate herbicide applications within rehabilitation areas for any establishing weeds. All disturbed soils should be covered with composted mulch as a primary measure to avoid weed incursion.

7.4 Erosion and Sediment Control

An erosion and sediment and control plan will be required during construction to ensure wetlands are not impacted upon. This includes the use of silt fences and sediment traps to ensure downstream aquatic habitats are not impacted. Particular care should be taken when conducting earthworks in proximity to drainage lines etc.

7.5 Fauna Spotter/Catcher During Clearing Operations

During vegetation clearing works it is a requirement under the NC Act 1992 that a fauna spotter catcher working under a rehabilitation permit be present on site to capture and relocate any fauna that may occur within the clearing alignments.

Plate 14. Photos of target weed species for eradication

Singapore Daisy



Pond Apple





8.0 Conclusions (summary of required actions)

Below we outline the main summary of actions required by the client (Douglas Shire Council) to address significant residual impacts and other considerations, for the further progression of the proposal and the alignment presented in this report. These actions are taken from the bold-font line items listed above.

1) A single Of Concern RE is located within the project site (RE 7.1.4a). A total of 0.02 ha of this community is mapped within the proposed clearing area. The Category B regulated vegetation code legally applies with a requirement of offset for 0.02 ha of impacted vegetation. The Endangered RE 7.3.23a, which corresponds with the aforementioned TEC, does not occur within the clearing footprint despite the Queensland Government mapping. The proposal is seeking to develop only pre-cleared areas within mapped RE 7.3.23a.

2) A portion of the project site is located within an area shown as a High Ecological Significance (HES) wetland on the vegetation management wetlands map. This occurs on the northwest side of Cape Tribulation Road on the northern side of the Daintree River. An area of 0.24 ha is proposed to be cleared for widening the built road alignment (see **Figure 9**). As per a SARA pre-lodgement meeting record (Ref # 2111-25845 SPL – 22 November 2021), if there is no significant change to the hydrology of the northern side of the Daintree River adjacent to the HES wetland resulting from the proposed clearing alignment, then there is no requirement for a referral. A hydrological study is recommended to determine this.

3) All remnant vegetation within the project site is located within an area shown as Essential Habitat for an animal or plant that is endangered or vulnerable wildlife. The proposal requires the clearance of essential habitat (0.3 ha) listed under the VM Act 1999 (**Figure 12**). This is mapped for the Estuarine Crocodile, Southern Cassowary, Spectacled Flying Fox, Diadem Leaf-nosed Bat, Macleay's Fig Parrot, *Acronychia acuminata* and *Isachne sharpii*. The field survey determined that Spectacled Flying Foxes, Estuarine Crocodiles and Macleay's Fig Parrot do use the project site and that there is reasonable likelihood for Southern Cassowary to utilise this area too.

4) All remnant vegetation mapped within the project site is located within a high-risk area mapped for NCA listed terrestrial flora (**Appendix D**). A protected plant survey was undertaken as per the protect plant flora survey guidelines. Five (5) threatened flora species were recorded within 100m of the proposed alignment.

   - *Rhodamnia sessiliflora* (Endangered)
   - *Myrmecodia beccarii* (Vulnerable)
   - *Acriopsis emarginata* (Vulnerable)
   - *Rhodomyrtus effusa* (Endangered)
   - *Dendrobium nindii* (Endangered)

No protected plants are proposed to be directly impacted as a result of the proposal. All recorded plants are outside of the proposed alignment boundary. Regardless, an impact management plan prepared by a suitably qualified botanist or ecologist is required to outline control mechanisms of residual impacts such as weeds, fragmentation and exclusion fencing, to ensure no net loss. An approved impact management plan from DESI will result in a protected plant clearing permit which is required prior to clearing vegetation within 100 m of a protected plant.

5) Marine plants under the *Fisheries Act 1994* were recorded on the project site throughout much of the proposed alignment (see **Figure 11**). Errors in the mapping of remnant REs on the site have resulted in some areas of marine plants (largely mangrove-dominant areas above the highest astronomical tide (HAT) line – described in Section 4.2) not being mapped. In total, including both mapped and unmapped, ground-truthed marine plants, a total of 0.4 ha of marine plants are proposed to be cleared as a result of the project. A permit application with Qld Department of Agriculture and Fisheries will be required to clear marine plants.

6) In line with SDAP 8, PO21 - determination of the extent and duration of works (dredging, cable works) is required by project hydrologists and engineers in conjunction with SARA in order to demonstrate that:

a. works are safe regarding protection of the marine environment and by meeting the National Assessment Guidelines for Dredging 2009, Department of Environment and Energy, 2009, or later version and;
b. are supported by a monitoring and management plan that protects the marine environment and that complies with the National Assessment Guidelines for Dredging 2009, Department of Environment and Energy, 2009, or later version.

7) In line with SDAP 8, PO23 - the proposal seeks to widen the road infrastructure and increase capacity of the ferry way between the northern and southern sides of the Daintree River. Determination of the operational safety of the works (dredging, cable works) post-sealing in response to storms, is required by project hydrologists and engineers in conjunction with SARA (ref. SDAP 8). This must ensure safe operations during and following a storm tide event, and that tidal work is designed and located in accordance with the Guideline: Building and engineering standards for tidal works - Department of Environment and Heritage Protection, 2017.

8) In line with SDAP 9, PO3 – PO9 and SDAP 16, PO92 - the current alignment requires discussion between project hydrologists and engineers in conjunction with SARA in reference to these Performance outcomes. Forthcoming hydrology reports, final engineering designs and acid-sulphate soils documentation are required.

9) Update authority number MPW2014/GBRC0016-1 for dredging of the Daintree River at the Daintree Ferry crossing channel, permitted by the State Government from a volume of 10,000m^3 to 20,000m^3 per year over the validity period of the authority (5 July 2024 – 4 July 2034).

10) The project site sits within the Great Barrier Reef Marine Park. The Park contains multi-use areas governed by zoning plans that provide for a range of ecologically-sustainable recreational, commercial and research opportunities and the continuation of traditional activities. These plans identify the activities that require a permit and rules that must be followed by all users. The client must apply for a permit through the managing agencies (https://www2.gbrmpa.gov.au/access/permits/how-apply-permit). It is strongly encouraged that new permit applicants contact Traditional Owners that are custodians of the land on which the project is proposed, to help ensure the best outcomes for the management of the Park.

Key offsets (presented in Plate 15 below):

- **A financial offset is required for 0.02 ha of Category B Of Concern RE 7.1.4a**
- **A financial offset is required for 0.3 ha of Essential Habitat**
- **A financial offset is required for 0.3 ha of Wildlife Habitat**
- **A financial offset is required for 0.24 ha of HES Wetland**
- **A financial offset is required for 0.4 ha of Marine Plants**

Plate 15. Queensland Government (DETSI)-calculated financial offsets for affected matters

MARINE PLANTS

Financial settlement offset calculator

Payment details

Non-protected area cost

On ground cost	$48,000.00
Landholder incentive payment	$0.00
Administrative cost	$12,000.00
Total non-protected area cost	$60,000.00

Protected area cost

Total protected area cost	$0.00

Total cost

Grand total	$60,000.00

Total offset area: 1.6 ha

Section 1

Bioregion
Inshore (non-remote)
Subregion
Wet Tropic Coast
Impact area
0.4 ha
Notional offset area
1.6 ha
Distinct matter area 1.1

Impact area: 0.4 ha
Notional offset area: 1.6 ha

Matter groups:

- 1.1.1: Marine plants

HES WETLANDS

Financial settlement offset calculator

Payment details

Non-protected area cost

On ground cost	$28,800.00
Landholder incentive payment	$0.00
Administrative cost	$7,200.00
Total non-protected area cost	$36,000.00

Protected area cost

Total protected area cost	$0.00

Total cost

Grand total	$36,000.00

Total offset area: 0.96 ha

Section 1

Bioregion
Inshore (non-remote)
Subregion
Wet Tropic Coast
Impact area
0.24 ha
Notional offset area
0.96 ha
Distinct matter area 1.1

Impact area: 0.24 ha
Notional offset area: 0.96 ha

Matter groups:

- 1.1.1: Marine wetlands

REGIONAL ECOSYSTEM 7.1.4a (INCL. ESSENTIAL HABITAT/WILDLIFE HABITAT)

Financial settlement offset calculator

Payment details

Non-protected area cost

On ground cost	$1,600.00
Landholder incentive payment	$10,000.00
Administrative cost	$400.00
Total non-protected area cost	$12,000.00

Protected area cost

Total protected area cost	$0.00

Total cost

Grand total	$12,000.00

Total offset area: 0.08 ha

Section 1

LGA
Douglas Shire Council
Bioregion
Wet Tropics
Subregion
Daintree - Bloomfield
Impact area
0.02 ha
Notional offset area
0.08 ha
Distinct matter area 1.1

Impact area: 0.02 ha
Notional offset area: 0.08 ha

Matter groups:

- 1.1.1: Regional ecosystem—7.1.4 (Mangrove and vine forest closed forest of the brackish zone)

9.0 References

Aumann, T. & D. Baker-Gabb (1991). RAOU Report 75. A Management Plan for the Red Goshawk. RAOU. Royal Australasian Ornithologists Union, Melbourne.

Barrett, G., A. Silcocks, S. Barry, R. Cunningham & R. Poulter (2003). The New Atlas of Australian Birds. Melbourne, Victoria: Birds Australia.

Braithwaite, L., et al. (1988). The distribution of arboreal marsupials in relation to eucalypt forest types in the Eden (NSW) Woodchip Concession Area. *Wildlife Research* **15**: 363-373.

Burnett S (2001) The Mammals of the Mount Molloy Stock Route, Reserves and Spear Creek, report to Mitchell River Watershed Management Group, Atherton Tablelands.

Churchill S.K. (2009). Australian bats- Second Edition. Sydney: Allen & Unwin.

Curtis LK and Dennis AJ (2012) Queensland's Threatened Animals, CSIRO Publishing, Collingwood, Victoria.

Debus, S. J. S. and C. Wood (2007). "Growth of a captive nestling Masked Owl Tyto novaehollandiae." Australian Field Ornithology 24: 49-53.

Debus, S. & G. Czechura (1988b). Field identification of the Red Goshawk Erythrotriorchis radiatus. Australian Bird Watcher. 12:154-159

Dennis, A. J. (2012). Spectacled flying fox *Pteropus conspicillatus* Gould. 1850. Queensland's Threatened Animals. L. K. Curtis, A. J. Dennis, K. R. McDonald, P. M. Kyne and S. J. S. Debus. Collingwood, Victoria, CSIRO Publishing.

Department of Climate Change, Energy, Environment and Water (DCCEEW 2023 and DCCEEW 2023) SPRAT Profile Database http://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl accessed 15-03-2023.

Department of Environment and Science (2024a) https://apps.des.qld.gov.au/report-request/species-list/ accessed 15-03-2023

DES (2024b) Department of Environment and Science Species Profile Search https://apps.des.qld.gov.au/species-search/ accessed 15-03-2023.

Eyre, T. J. (2005). "Hollow bearing trees in large glider habitat in south-east Queensland, Australia: abundance, spaital distribution and management." Pacific Journal of Conservation Biology 125: 23-37.

Eyre, T. J. (2006). "Regional habitat selection of large gliding possums at forest stand and landscape scales in southern Queensland, Australia I. Greater glider (Petauroides volans)." Forest Ecology and Management 235: 270-282.

Eyre, T.J., Kelly, A.L., Neldner, V.J., Wilson, B.A., Ferguson, D.J., Laidlaw, M.J. and Franks, A.J. (2015) BioCondition: a condition assessment framework for terrestrial biodiversity in Queensland. Queensland Herbarium, Brisbane. 82 p.

Garnett. S and Szabo, J. and Dutson, G. 2011. The Action Plan for Australian Birds 2010. CSIRO Publishing Melbourne.

Higgins, P.J. (ed.) (1999). Handbook of Australian, New Zealand and Antarctic Birds. Volume Four - Parrots to Dollarbird. Melbourne: Oxford University Press.

Hoskin, C. and J.-M. Hero (2008). Rainforest frogs of the Wet Tropics, north-east Australia. Gold Coast, Australia, Griffith University.

McDonald KR, Bolitho E, Dennis A, Simpson N & Winter JW (2000). Recovery plan for the magnificent broodfrog *Pseudophryne covacevichae* 2000–2004. Environment Australia Canberra.

Marchant, S. & P.J. Higgins, eds. (1993). Handbook of Australian, New Zealand and Antarctic Birds. Volume 2 - Raptors to Lapwings. Melbourne, Victoria: Oxford University Press.

McGregor, D.C., Padovan, A., Georges, A. et al. Genetic evidence supports three previously described species of greater glider, *Petauroides volans*, *P. minor*, and *P. armillatus*. Sci Rep 10, 19284 (2020).

Oakwood, M. (1997). The ecology of the northern quoll, Dasyurus hallucatus. Canberra, Australian National University.

Oakwood, M. (2000). "Reproduction and demography of the northern quoll, Dasyurus hallucatus, in the lowland savanna of northern Australia. ." Australian Journal of Zoology 48: 519-539.

Oakwood, M. (2002). "Spaital and social organisation of a carnivorous marsupial, Dasyurus hallucatus. Journal of Zoology, London 257: 237-248.

Smith, G. C., et al. (2007). "Home range and habitat use of a low-density population of greater gliders, Petauroides volans (Pseudocheiridae: Marsupialia), in a hollow-limiting environment." Wildlife Research 32: 472-483.

Starr C, Waller N (2016) Tallaroo Nature Refuge Biodiversity Survey Report, Northern Gulf Resource Management Group, Mareeba, Australia.

Starr, C. and N. Waller (2014). Biodiversity Survey Report, Steve Irwin Wildlife Reserve/ Bertiehaugh Station. Mareeba, Australia, Northern Gulf Resource Management Group: 30.

Starr, C.R., Hughes, R. T. Hemmings, M. S, Coase, J. and Brown, M. (2021) 'Field studies of a high elevation population of northern Greater glider Petauroides volans minor in the Bluff State Forest, Far North Queensland', *Australian Zoologist*, 41(4), pp. 743–752.

Pavey, C.R and Kutt, S.A (2008). Large-eared Horseshoe-bat *Rhinolophus philippinensis*. In: Van Dyck, S., ed. Mammals of Australia 3rd Edition. Australian Museum.

Van Dyck, S. and R. Strahan (2008). The Mammals of Australia. Sydney, Reed New Holland.

Vanderduys, E. (2012). Atherton Delma Delma mitella Queensland's Threatened Animals. L. K. Curtis, A. J. Dennis, K. R. McDonald, P. M. Kyne and S. J. S. Debus. Collingwood, VIC, CSIRO Publishing: 217.

Waller, N. and C. Starr (2017). Mareeba Wetlands Wildlife Survey. Mareeba, Northern Gulf Research Management Group.

Zich F. (2020). Browse Species, Australian Tropical Rainforest Plants, Location. Available from: https://apps.lucidcentral.org/rainforest/text/entities/index.htm. Accessed 20-01 2023.

Appendix A Protected Matters Report (EPBC)

Australian Government
Department of Climate Change, Energy, the Environment and Water

EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

Report created: 26-Jun-2024

Summary
Details
- Matters of NES
- Other Matters Protected by the EPBC Act
- Extra Information

Caveat
Acknowledgements

Summary

Matters of National Environment Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the Administrative Guidelines on Significance.

World Heritage Properties:	2
National Heritage Places:	3
Wetlands of International Importance (Ramsar	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	3
Listed Threatened Species:	70
Listed Migratory Species:	40

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at https://www.dcceew.gov.au/parks-heritage/heritage

A permit may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Lands:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	82
Whales and Other Cetaceans:	2
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None
Habitat Critical to the Survival of Marine Turtles:	None

Extra Information

This part of the report provides information that may also be relevant to the area you have

State and Territory Reserves:	10
Regional Forest Agreements:	None
Nationally Important Wetlands:	1
EPBC Act Referrals:	1
Key Ecological Features (Marine):	None
Biologically Important Areas:	None
Bioregional Assessments:	None
Geological and Bioregional Assessments:	None

Details

Matters of National Environmental Significance

World Heritage Properties [Resource Information]

Name	State	Legal Status	Buffer Status
Great Barrier Reef	QLD	Declared property	In feature area
Wet Tropics of Queensland	QLD	Declared property	In buffer area only

National Heritage Places [Resource Information]

Name	State	Legal Status	Buffer Status
Indigenous			
Wet Tropics World Heritage Area (Indigenous Values)	QLD	Within listed place	In buffer area only
Natural			
Great Barrier Reef	QLD	Listed place	In feature area
Wet Tropics of Queensland	QLD	Listed place	In buffer area only

Listed Threatened Ecological Communities [Resource Information]

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.
Status of Vulnerable, Disallowed and Ineligible are not MNES under the EPBC Act.

Community Name	Threatened Category	Presence Text	Buffer Status
Broad leaf tea-tree (Melaleuca viridiflora) woodlands in high rainfall coastal north Queensland	Endangered	Community likely to occur within area	In feature area
Littoral Rainforest and Coastal Vine Thickets of Eastern Australia	Critically Endangered	Community likely to occur within area	In buffer area only
Lowland tropical rainforest of the Wet Tropics	Endangered	Community likely to occur within area	In feature area

Listed Threatened Species [Resource Information]

Status of Conservation Dependent and Extinct are not MNES under the EPBC Act.
Number is the current name ID.

Scientific Name	Threatened Category	Presence Text	Buffer Status
BIRD			
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat known to occur within area	In feature area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area	In feature area
Casuarius casuarius johnsonii Southern Cassowary, Australian Cassowary, Double-wattled Cassowary [25986]	Endangered	Species or species habitat known to occur within area	In feature area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat known to occur within area	In feature area
Erythrotriorchis radiatus Red Goshawk [942]	Endangered	Species or species habitat likely to occur within area	In feature area
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat may occur within area	In feature area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat known to occur within area	In feature area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area	In feature area
Limnodromus semipalmatus Asian Dowitcher [843]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Limosa lapponica baueri Nunivak Bar-tailed Godwit, Western Alaskan Bar-tailed Godwit [86380]	Endangered	Species or species habitat known to occur within area	In feature area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area	In feature area
Sternula nereis nereis Australian Fairy Tern [82950]	Vulnerable	Species or species habitat known to occur within area	In buffer area only
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area	In feature area
Tyto novaehollandiae kimberli Masked Owl (northern) [26048]	Vulnerable	Species or species habitat likely to occur within area	In feature area
FISH			
Cairnsichthys bitaeniatus Daintree Rainbowfish [90721]	Critically Endangered	Species or species habitat known to occur within area	In buffer area only
Stiphodon semoni Opal Cling Goby [83909]	Critically Endangered	Species or species habitat likely to occur within area	In feature area
FROG			
Litoria dayi Australian Lace-lid, Lace-eyed Tree Frog, Day's Big-eyed Treefrog [86707]	Vulnerable	Species or species habitat likely to occur within area	In feature area
MAMMAL			
Dasyurus hallucatus Northern Quoll, Digul [Gogo-Yimidir], Wijingadda [Dambimangari], Wiminji [Martu] [331]	Endangered	Species or species habitat likely to occur within area	In feature area
Dasyurus maculatus gracilis Spotted-tailed Quoll (North Queensland), Yarri [64475]	Endangered	Species or species habitat may occur within area	In feature area
Hipposideros semoni Semon's Leaf-nosed Bat, Greater Wart-nosed Horseshoe-bat [180]	Vulnerable	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Mesembriomys gouldii rattoides			
Black-footed Tree-rat (north Queensland), Shaggy Rabbit-rat [87620]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Petauroides minor			
Greater Glider (northern), Greater Glider (north-eastern Queensland) [92008]	Vulnerable	Species or species habitat likely to occur within area	In buffer area only
Phascolarctos cinereus (combined populations of Qld, NSW and the ACT)			
Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104]	Endangered	Species or species habitat may occur within area	In feature area
Pteropus conspicillatus			
Spectacled Flying-fox [185]	Endangered	Species or species habitat known to occur within area	In feature area
Rhinolophus robertsi			
Large-eared Horseshoe Bat, Greater Large-eared Horseshoe Bat [87639]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Saccolaimus saccolaimus nudicluniatus			
Bare-rumped Sheath-tailed Bat, Bare-rumped Sheathtail Bat [66889]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Xeromys myoides			
Water Mouse, False Water Rat, Yirrkoo [66]	Vulnerable	Species or species habitat likely to occur within area	In feature area
PLANT			
Acriopsis emarginata			
Pale Chandelier Orchid [83928]	Vulnerable	Species or species habitat known to occur within area	In feature area
Actephila foetida			
[12078]	Vulnerable	Species or species habitat known to occur within area	In buffer area only
Arthraxon hispidus			
Hairy-joint Grass [9338]	Vulnerable	Species or species habitat may occur within area	In feature area
Bruguiera x hainesii			
Haines's Orange Mangrove [91351]	Critically Endangered	Species or species habitat likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Canarium acutifolium [23956]	Vulnerable	Species or species habitat likely to occur within area	In buffer area only
Carronia pedicellata [24178]	Endangered	Species or species habitat likely to occur within area	In feature area
Chingia australis [24603]	Endangered	Species or species habitat known to occur within area	In feature area
Cyclophyllum costatum a shrub [82770]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Dendrobium johannis Chocolate Tea Tree Orchid [13585]	Vulnerable	Species or species habitat likely to occur within area	In buffer area only
Dendrobium mirbelianum Dark-stemmed Antler Orchid, Mangrove Orchid [14310]	Endangered	Species or species habitat likely to occur within area	In feature area
Dendrobium nindii an orchid [11289]	Endangered	Species or species habitat known to occur within area	In feature area
Drosera prolifera [9940]	Vulnerable	Species or species habitat likely to occur within area	In buffer area only
Endiandra cooperana [52889]	Endangered	Species or species habitat may occur within area	In buffer area only
Hymenasplenium wildii listed as Asplenium wildii [92431]	Vulnerable	Species or species habitat known to occur within area	In feature area
Leichhardtia araujacea [91900]	Critically Endangered	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Mitrantia bilocularis [8269]	Critically Endangered	Species or species habitat may occur within area	In buffer area only
Myrmecodia beccarii Ant Plant [11852]	Vulnerable	Species or species habitat known to occur within area	In feature area
Phaius pictus [22564]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Phalaenopsis rosenstromii listed as Phalaenopsis amabilis subsp. rosenstromii Native Moth Orchid [15984]	Endangered	Species or species habitat likely to occur within area	In feature area
Phaleria biflora [82049]	Vulnerable	Species or species habitat likely to occur within area	In buffer area only
Phlegmariurus dalhousieanus BlueTassel-fern [86550]	Endangered	Species or species habitat likely to occur within area	In feature area
Phlegmariurus filiformis Rat's Tail Tassel-fern [86551]	Endangered	Species or species habitat may occur within area	In buffer area only
Phlegmariurus squarrosus Rock Tassel-fern, Water Tassel-fern [86556]	Critically Endangered	Species or species habitat may occur within area	In feature area
Phlegmariurus tetrastichoides Square Tassel Fern [86555]	Vulnerable	Species or species habitat may occur within area	In feature area
Polyphlebium endlicherianum Middle Filmy Fern [87494]	Endangered	Species or species habitat likely to occur within area	In buffer area only
Polyscias bellendenkerensis [7237]	Vulnerable	Species or species habitat may occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Ristantia gouldii [18776]	Vulnerable	Species or species habitat likely to occur within area	In buffer area only
Vappodes lithocola Dwarf Butterfly Orchid, Cooktown Orchid [78893]	Endangered	Species or species habitat may occur within area	In buffer area only
Vappodes phalaenopsis Cooktown Orchid [78894]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Vrydagzynea grayi Tonsil Orchid [83575]	Endangered	Species or species habitat likely to occur within area	In feature area
Zeuxine polygonoides Velvet Jewel Orchid [46794]	Vulnerable	Species or species habitat may occur within area	In buffer area only
REPTILE			
Caretta caretta Loggerhead Turtle [1763]	Endangered	Foraging, feeding or related behaviour likely to occur within area	In feature area
Chelonia mydas Green Turtle [1765]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In feature area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Foraging, feeding or related behaviour likely to occur within area	In feature area
Egernia rugosa Yakka Skink [1420]	Vulnerable	Species or species habitat may occur within area	In feature area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Species or species habitat known to occur within area	In feature area
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Breeding likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Natator depressus			
Flatback Turtle [59257]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In feature area
SHARK			
Pristis pristis			
Freshwater Sawfish, Largetooth Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Vulnerable	Species or species habitat may occur within area	In feature area
Pristis zijsron			
Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442]	Vulnerable	Species or species habitat known to occur within area	In feature area
Sphyrna lewini			
Scalloped Hammerhead [85267]	Conservation Dependent	Species or species habitat likely to occur within area	In feature area

Listed Migratory Species		[Resource Information]	
Scientific Name	Threatened Category	Presence Text	Buffer Status
Migratory Marine Birds			
Anous stolidus			
Common Noddy [825]		Species or species habitat known to occur within area	In feature area
Apus pacificus			
Fork-tailed Swift [678]		Species or species habitat likely to occur within area	In feature area
Fregata ariel			
Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat known to occur within area	In feature area
Fregata minor			
Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat likely to occur within area	In feature area
Phaethon lepturus			
White-tailed Tropicbird [1014]		Species or species habitat may occur within area	In feature area
Migratory Marine Species			
Anoxypristis cuspidata			
Narrow Sawfish, Knifetooth Sawfish [68448]		Species or species habitat likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Caretta caretta Loggerhead Turtle [1763]	Endangered	Foraging, feeding or related behaviour likely to occur within area	In feature area
Chelonia mydas Green Turtle [1765]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In feature area
Crocodylus porosus Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat likely to occur within area	In feature area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Foraging, feeding or related behaviour likely to occur within area	In feature area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Species or species habitat known to occur within area	In feature area
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Breeding likely to occur within area	In feature area
Mobula alfredi as Manta alfredi Reef Manta Ray, Coastal Manta Ray [90033]		Species or species habitat may occur within area	In feature area
Mobula birostris as Manta birostris Giant Manta Ray [90034]		Species or species habitat may occur within area	In feature area
Natator depressus Flatback Turtle [59257]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In feature area
Orcaella heinsohni Australian Snubfin Dolphin [81322]		Species or species habitat may occur within area	In feature area
Pristis pristis Freshwater Sawfish, Largetooth Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Vulnerable	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Pristis zijsron Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442]	Vulnerable	Species or species habitat known to occur within area	In feature area
Sousa sahulensis as Sousa chinensis Australian Humpback Dolphin [87942]		Foraging, feeding or related behaviour known to occur within area	In feature area
Migratory Terrestrial Species			
Cecropis daurica Red-rumped Swallow [80610]		Species or species habitat known to occur within area	In feature area
Cuculus optatus Oriental Cuckoo, Horsfield's Cuckoo [86651]		Species or species habitat known to occur within area	In feature area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area	In feature area
Hirundo rustica Barn Swallow [662]		Species or species habitat known to occur within area	In feature area
Monarcha frater Black-winged Monarch [607]		Species or species habitat may occur within area	In feature area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat known to occur within area	In feature area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area	In feature area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat known to occur within area	In feature area
Symposiachrus trivirgatus as Monarcha trivirgatus Spectacled Monarch [83946]		Species or species habitat known to occur within area	In feature area
Migratory Wetlands Species			

Scientific Name	Threatened Category	Presence Text	Buffer Status
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat known to occur within area	In feature area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat known to occur within area	In feature area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat known to occur within area	In feature area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area	In feature area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area	In feature area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat known to occur within area	In feature area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat known to occur within area	In feature area
Limnodromus semipalmatus Asian Dowitcher [843]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat known to occur within area	In feature area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area	In feature area
Pandion haliaetus Osprey [952]		Breeding known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area	In feature area

Other Matters Protected by the EPBC Act

Listed Marine Species			[Resource Information]
Scientific Name	Threatened Category	Presence Text	Buffer Status
Bird			
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat known to occur within area	In feature area
Anous stolidus Common Noddy [825]		Species or species habitat known to occur within area	In feature area
Anseranas semipalmata Magpie Goose [978]		Species or species habitat may occur within area overfly marine area	In feature area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area	In feature area
Bubulcus ibis as Ardea ibis Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area	In feature area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat known to occur within area	In feature area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat known to occur within area overfly marine area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area overfly marine area	In feature area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area overfly marine area	In feature area
Cecropis daurica as Hirundo daurica Red-rumped Swallow [80610]		Species or species habitat known to occur within area overfly marine area	In feature area
Chalcites osculans as Chrysococcyx osculans Black-eared Cuckoo [83425]		Species or species habitat may occur within area overfly marine area	In feature area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat known to occur within area	In feature area
Fregata ariel Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat known to occur within area	In feature area
Fregata minor Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat likely to occur within area	In feature area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat known to occur within area overfly marine area	In feature area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area	In feature area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area overfly marine area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Hirundo rustica Barn Swallow [662]		Species or species habitat known to occur within area overfly marine area	In feature area
Limnodromus semipalmatus Asian Dowitcher [843]	Vulnerable	Species or species habitat may occur within area overfly marine area	In buffer area only
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat known to occur within area	In feature area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area	In feature area
Monarcha frater Black-winged Monarch [607]		Species or species habitat may occur within area overfly marine area	In feature area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat known to occur within area overfly marine area	In feature area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area overfly marine area	In feature area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area	In feature area
Pandion haliaetus Osprey [952]		Breeding known to occur within area	In feature area
Phaethon lepturus White-tailed Tropicbird [1014]		Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat known to occur within area overfly marine area	In feature area
Rostratula australis as Rostratula benghalensis (sensu lato) Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area overfly marine area	In feature area
Symposiachrus trivirgatus as Monarcha trivirgatus Spectacled Monarch [83946]		Species or species habitat known to occur within area overfly marine area	In feature area
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area overfly marine area	In feature area
Fish			
Acentronura tentaculata Shortpouch Pygmy Pipehorse [66187]		Species or species habitat may occur within area	In feature area
Bulbonaricus davaoensis Davao Pughead Pipefish [66190]		Species or species habitat may occur within area	In feature area
Choeroichthys brachysoma Pacific Short-bodied Pipefish, Short-bodied Pipefish [66194]		Species or species habitat may occur within area	In feature area
Choeroichthys sculptus Sculptured Pipefish [66197]		Species or species habitat may occur within area	In feature area
Choeroichthys suillus Pig-snouted Pipefish [66198]		Species or species habitat may occur within area	In feature area
Corythoichthys amplexus Fijian Banded Pipefish, Brown-banded Pipefish [66199]		Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Corythoichthys flavofasciatus Reticulate Pipefish, Yellow-banded Pipefish, Network Pipefish [66200]		Species or species habitat may occur within area	In feature area
Corythoichthys intestinalis Australian Messmate Pipefish, Banded Pipefish [66202]		Species or species habitat may occur within area	In feature area
Corythoichthys ocellatus Orange-spotted Pipefish, Ocellated Pipefish [66203]		Species or species habitat may occur within area	In feature area
Corythoichthys paxtoni Paxton's Pipefish [66204]		Species or species habitat may occur within area	In feature area
Corythoichthys schultzi Schultz's Pipefish [66205]		Species or species habitat may occur within area	In feature area
Cosmocampus maxweberi Maxweber's Pipefish [66209]		Species or species habitat may occur within area	In feature area
Doryrhamphus dactyliophorus Banded Pipefish, Ringed Pipefish [66210]		Species or species habitat may occur within area	In feature area
Doryrhamphus excisus Bluestripe Pipefish, Indian Blue-stripe Pipefish, Pacific Blue-stripe Pipefish [66211]		Species or species habitat may occur within area	In feature area
Doryrhamphus janssi Cleaner Pipefish, Janss' Pipefish [66212]		Species or species habitat may occur within area	In feature area
Festucalex cinctus Girdled Pipefish [66214]		Species or species habitat may occur within area	In feature area
Festucalex gibbsi Gibbs' Pipefish [66215]		Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Halicampus dunckeri Red-hair Pipefish, Duncker's Pipefish [66220]		Species or species habitat may occur within area	In feature area
Halicampus grayi Mud Pipefish, Gray's Pipefish [66221]		Species or species habitat may occur within area	In feature area
Halicampus macrorhynchus Whiskered Pipefish, Ornate Pipefish [66222]		Species or species habitat may occur within area	In feature area
Halicampus mataafae Samoan Pipefish [66223]		Species or species habitat may occur within area	In feature area
Halicampus nitidus Glittering Pipefish [66224]		Species or species habitat may occur within area	In feature area
Halicampus spinirostris Spiny-snout Pipefish [66225]		Species or species habitat may occur within area	In feature area
Hippichthys cyanospilos Blue-speckled Pipefish, Blue-spotted Pipefish [66228]		Species or species habitat may occur within area	In feature area
Hippichthys heptagonus Madura Pipefish, Reticulated Freshwater Pipefish [66229]		Species or species habitat may occur within area	In feature area
Hippichthys penicillus Beady Pipefish, Steep-nosed Pipefish [66231]		Species or species habitat may occur within area	In feature area
Hippichthys spicifer Belly-barred Pipefish, Banded Freshwater Pipefish [66232]		Species or species habitat may occur within area	In feature area
Hippocampus bargibanti Pygmy Seahorse [66721]		Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Hippocampus histrix Spiny Seahorse, Thorny Seahorse [66236]		Species or species habitat may occur within area	In feature area
Hippocampus kuda Spotted Seahorse, Yellow Seahorse [66237]		Species or species habitat may occur within area	In feature area
Hippocampus planifrons Flat-face Seahorse [66238]		Species or species habitat may occur within area	In feature area
Hippocampus zebra Zebra Seahorse [66241]		Species or species habitat may occur within area	In feature area
Micrognathus andersonii Anderson's Pipefish, Shortnose Pipefish [66253]		Species or species habitat may occur within area	In feature area
Micrognathus brevirostris thorntail Pipefish, Thorn-tailed Pipefish [66254]		Species or species habitat may occur within area	In feature area
Microphis brachyurus Short-tail Pipefish, Short-tailed River Pipefish [66257]		Species or species habitat may occur within area	In feature area
Nannocampus pictus Painted Pipefish, Reef Pipefish [66263]		Species or species habitat may occur within area	In feature area
Phoxocampus diacanthus Pale-blotched Pipefish, Spined Pipefish [66266]		Species or species habitat may occur within area	In feature area
Siokunichthys breviceps Softcoral Pipefish, Soft-coral Pipefish [66270]		Species or species habitat may occur within area	In feature area
Solegnathus hardwickii Pallid Pipehorse, Hardwick's Pipehorse [66272]		Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Solenostomus cyanopterus Robust Ghostpipefish, Blue-finned Ghost Pipefish, [66183]		Species or species habitat may occur within area	In feature area
Solenostomus paradoxus Ornate Ghostpipefish, Harlequin Ghost Pipefish, Ornate Ghost Pipefish [66184]		Species or species habitat may occur within area	In feature area
Syngnathoides biaculeatus Double-end Pipehorse, Double-ended Pipehorse, Alligator Pipefish [66279]		Species or species habitat may occur within area	In feature area
Trachyrhamphus bicoarctatus Bentstick Pipefish, Bend Stick Pipefish, Short-tailed Pipefish [66280]		Species or species habitat may occur within area	In feature area
Trachyrhamphus longirostris Straightstick Pipefish, Long-nosed Pipefish, Straight Stick Pipefish [66281]		Species or species habitat may occur within area	In feature area
Reptile			
Caretta caretta Loggerhead Turtle [1763]	Endangered	Foraging, feeding or related behaviour likely to occur within area	In feature area
Chelonia mydas Green Turtle [1765]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In feature area
Crocodylus porosus Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat likely to occur within area	In feature area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Foraging, feeding or related behaviour likely to occur within area	In feature area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Species or species habitat known to occur within area	In feature area
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Breeding likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Natator depressus			
Flatback Turtle [59257]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In feature area

Whales and Other Cetaceans			[Resource Information]
Current Scientific Name	Status	Type of Presence	Buffer Status
Mammal			
Orcaella heinsohni			
Australian Snubfin Dolphin [81322]		Species or species habitat may occur within area	In feature area
Sousa sahulensis			
Australian Humpback Dolphin [87942]		Foraging, feeding or related behaviour known to occur within area	In feature area

Extra Information

State and Territory Reserves			[Resource Information]
Protected Area Name	Reserve Type	State	Buffer Status
Acaciavale	Nature Refuge	QLD	In buffer area only
Daintree	National Park	QLD	In buffer area only
Daintree	National Park Aboriginal	QLD	In feature area
Eastern Kuku Yalanji	Indigenous Protected Area	QLD	In feature area
Great Barrier Reef Coast	Marine Park	QLD	In feature area
Kaba-Kada	Nature Refuge	QLD	In buffer area only
Lot 83	Nature Reserve	QLD	In buffer area only
Milky Pine	Nature Refuge	QLD	In buffer area only
Rainforest Rescue	Nature Refuge	QLD	In buffer area only
The Swamp Forest	Nature Refuge	QLD	In buffer area only

Nationally Important Wetlands		[Resource Information]
Wetland Name	State	Buffer Status
Lower Daintree River	QLD	In feature area

EPBC Act Referrals				[Resource Information]
Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
Daintree Microgrid Project	2022/09341		Completed	In buffer area only

Caveat

1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data are available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance

3 DATA SOURCES

Threatened ecological communities

For threatened ecological communities where the distribution is well known, maps are generated based on information contained in recovery plans, State vegetation maps and remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species

Threatened, migratory and marine species distributions have been discerned through a variety of methods. Where distributions are well known and if time permits, distributions are inferred from either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc.) together with point locations and described habitat; or modelled (MAXENT or BIOCLIM habitat modelling) using

Where little information is available for a species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc.).

In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More detailed distribution mapping methods are used to update these distributions

4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

The following groups have been mapped, but may not cover the complete distribution of the species:

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded
- seals which have only been mapped for breeding sites near the Australian continent

The breeding sites may be important for the protection of the Commonwealth Marine environment.

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

-Office of Environment and Heritage, New South Wales
-Department of Environment and Primary Industries, Victoria
-Department of Primary Industries, Parks, Water and Environment, Tasmania
-Department of Environment, Water and Natural Resources, South Australia
-Department of Land and Resource Management, Northern Territory
-Department of Environmental and Heritage Protection, Queensland
-Department of Parks and Wildlife, Western Australia
-Environment and Planning Directorate, ACT
-Birdlife Australia
-Australian Bird and Bat Banding Scheme
-Australian National Wildlife Collection
-Natural history museums of Australia
-Museum Victoria
-Australian Museum
-South Australian Museum
-Queensland Museum
-Online Zoological Collections of Australian Museums
-Queensland Herbarium
-National Herbarium of NSW
-Royal Botanic Gardens and National Herbarium of Victoria
-Tasmanian Herbarium
-State Herbarium of South Australia
-Northern Territory Herbarium
-Western Australian Herbarium
-Australian National Herbarium, Canberra
-University of New England
-Ocean Biogeographic Information System
-Australian Government, Department of Defence
Forestry Corporation, NSW
-Geoscience Australia
-CSIRO
-Australian Tropical Herbarium, Cairns
-eBird Australia
-Australian Government – Australian Antarctic Data Centre
-Museum and Art Gallery of the Northern Territory
-Australian Government National Environmental Science Program
-Australian Institute of Marine Science
-Reef Life Survey Australia
-American Museum of Natural History
-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania
-Tasmanian Museum and Art Gallery, Hobart, Tasmania
-Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Appendix B Wildlife Online (NCA)

Queensland Government

WildNet species list

Search Criteria: Species List for a Specified Point
Species: All
Type: Native
Queensland status: All
Records: All
Date: Since 1980
Latitude: -16.2598
Longitude: 145.3982
Distance: 5
Email: mark@4ec.com.au
Date submitted: Monday 22 Jul 2024 13:21:24
Date extracted: Monday 22 Jul 2024 13:30:02

The number of records retrieved = 441

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Information about your Species lists request is logged for quality assurance, user support and product enhancement purposes only.
The information provided should be appropriately acknowledged as being derived from WildNet database when it is used. As the WildNet Program is still in a process of collating and vetting data, it is possible the information given is not complete. Go to the WildNet database webpage (https://www.qld.gov.au/environment/plants-animals/species-information/wildnet) to find out more about WildNet and where to access other WildNet information products approved for publication. Feedback about WildNet species lists should be emailed to wildlife.online@des.qld.gov.au.

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	amphibians	Hylidae	*Litoria fallax*	eastern sedgefrog		C		2
animals	amphibians	Hylidae	*Litoria gracilenta*	graceful treefrog		C		24
animals	amphibians	Hylidae	*Litoria infrafrenata*	white lipped treefrog		C		8
animals	amphibians	Hylidae	*Litoria microbelos*	javelin frog		C		5
animals	amphibians	Hylidae	*Litoria nasuta*	striped rocketfrog		C		9
animals	amphibians	Hylidae	*Litoria rheocola*	common mistfrog		E		14
animals	amphibians	Hylidae	*Litoria rubella*	ruddy treefrog		C		2
animals	amphibians	Hylidae	*Litoria serrata*	tapping green eyed frog		V		6
animals	amphibians	Hylidae	*Litoria xanthomera*	orange thighed treefrog		C		31
animals	amphibians	Limnodynastidae	*Limnodynastes convexiusculus*	marbled frog		C		10
animals	amphibians	Microhylidae	*Austrochaperina fryi*	peeping whistlefrog		C		46
animals	amphibians	Microhylidae	*Austrochaperina pluvialis*	white browed whistlefrog		C		8
animals	amphibians	Myobatrachidae	*Crinia remota*	northern froglet		C		4
animals	amphibians	Myobatrachidae	*Mixophyes coggeri*	mottled barred frog		C		5
animals	amphibians	Ranidae	*Papurana daemeli*	Australian woodfrog		C		5
animals	birds	Acanthizidae	*Gerygone magnirostris*	large-billed gerygone		C		8
animals	birds	Acanthizidae	*Gerygone mouki*	brown gerygone		C		1
animals	birds	Acanthizidae	*Gerygone palpebrosa*	fairy gerygone		C		9
animals	birds	Acanthizidae	*Sericornis citreogularis*	yellow-throated scrubwren		C		1
animals	birds	Acanthizidae	*Sericornis magnirostra*	large-billed scrubwren		C		7
animals	birds	Accipitridae	*Accipiter fasciatus*	brown goshawk		C		1
animals	birds	Accipitridae	*Haliaeetus leucogaster*	white-bellied sea-eagle		C		1
animals	birds	Accipitridae	*Haliastur indus*	brahminy kite		C		7
animals	birds	Accipitridae	*Haliastur sphenurus*	whistling kite		C		6
animals	birds	Accipitridae	*Hamirostra melanosternon*	black-breasted buzzard		C		1
animals	birds	Accipitridae	*Milvus migrans*	black kite		C		8
animals	birds	Acrocephalidae	*Acrocephalus australis*	Australian reed-warbler		C		1
animals	birds	Alcedinidae	*Ceyx azureus*	azure kingfisher		C		11
animals	birds	Alcedinidae	*Ceyx pusillus*	little kingfisher		C		6
animals	birds	Alcedinidae	*Dacelo leachii*	blue-winged kookaburra		C		1
animals	birds	Alcedinidae	*Dacelo novaeguineae*	laughing kookaburra		C		4
animals	birds	Alcedinidae	*Tanysiptera sylvia*	buff-breasted paradise-kingfisher		C		8
animals	birds	Alcedinidae	*Todiramphus macleayii*	forest kingfisher		C		6
animals	birds	Alcedinidae	*Todiramphus sanctus*	sacred kingfisher		C		5
animals	birds	Alcedinidae	*Todiramphus sordidus*	Torresian kingfisher		C		5
animals	birds	Anatidae	*Anas superciliosa*	Pacific black duck		C		1
animals	birds	Anhingidae	*Anhinga novaehollandiae*	Australasian darter		C		2
animals	birds	Anseranatidae	*Anseranas semipalmata*	magpie goose		C		3
animals	birds	Apodidae	*Aerodramus terraereginae*	Australian swiftlet		C		6
animals	birds	Ardeidae	*Ardea alba modesta*	eastern great egret		C		9
animals	birds	Ardeidae	*Ardea intermedia*	intermediate egret		C		3
animals	birds	Ardeidae	*Ardea sumatrana*	great-billed heron		C		4
animals	birds	Ardeidae	*Bubulcus ibis*	cattle egret		C		1
animals	birds	Ardeidae	*Butorides striata*	striated heron		C		4
animals	birds	Ardeidae	*Egretta garzetta*	little egret		C		3
animals	birds	Ardeidae	*Egretta novaehollandiae*	white-faced heron		C		5

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	birds	Ardeidae	*Egretta sacra*	eastern reef egret		C		2
animals	birds	Ardeidae	*Ixobrychus flavicollis*	black bittern		C		3
animals	birds	Artamidae	*Artamus leucorynchus*	white-breasted woodswallow		C		5
animals	birds	Artamidae	*Melloria quoyi*	black butcherbird		C		15
animals	birds	Artamidae	*Strepera graculina*	pied currawong		C		2
animals	birds	Burhinidae	*Burhinus grallarius*	bush stone-curlew		C		1
animals	birds	Burhinidae	*Esacus magnirostris*	beach stone-curlew		V		1
animals	birds	Cacatuidae	*Cacatua galerita*	sulphur-crested cockatoo		C		14
animals	birds	Campephagidae	*Coracina lineata*	barred cuckoo-shrike		C		3
animals	birds	Campephagidae	*Coracina novaehollandiae*	black-faced cuckoo-shrike		C		3
animals	birds	Campephagidae	*Coracina papuensis*	white-bellied cuckoo-shrike		C		2
animals	birds	Campephagidae	*Edolisoma tenuirostre*	common cicadabird		C		2
animals	birds	Campephagidae	*Lalage leucomela*	varied triller		C		21
animals	birds	Casuariidae	*Casuarius casuarius johnsonii (southern population)*	southern cassowary (southern population)		E	E	18
animals	birds	Charadriidae	*Vanellus miles*	masked lapwing		C		3
animals	birds	Charadriidae	*Vanellus miles miles*	masked lapwing (northern subspecies)		C		3
animals	birds	Ciconiidae	*Ephippiorhynchus asiaticus*	black-necked stork		C		1
animals	birds	Cisticolidae	*Cisticola exilis*	golden-headed cisticola		C		1
animals	birds	Columbidae	*Chalcophaps longirostris*	Pacific emerald dove		C		8
animals	birds	Columbidae	*Columba leucomela*	white-headed pigeon		C		1
animals	birds	Columbidae	*Ducula bicolor*	pied imperial-pigeon		C		8
animals	birds	Columbidae	*Geopelia humeralis*	bar-shouldered dove		C		8
animals	birds	Columbidae	*Geopelia placida*	peaceful dove		C		1
animals	birds	Columbidae	*Lopholaimus antarcticus*	topknot pigeon		C		3
animals	birds	Columbidae	*Macropygia phasianella*	brown cuckoo-dove		C		4
animals	birds	Columbidae	*Ptilinopus magnificus*	wompoo fruit-dove		C		18
animals	birds	Columbidae	*Ptilinopus regina*	rose-crowned fruit-dove		C		5
animals	birds	Columbidae	*Ptilinopus superbus*	superb fruit-dove		C		9
animals	birds	Corvidae	*Corvus orru*	Torresian crow		C		1
animals	birds	Cuculidae	*Centropus phasianinus*	pheasant coucal		C		4
animals	birds	Cuculidae	*Chalcites minutillus*	little bronze-cuckoo		C		1
animals	birds	Cuculidae	*Chalcites minutillus barnardi*	Eastern little bronze-cuckoo		C		1
animals	birds	Cuculidae	*Chalcites minutillus russatus*	Gould's bronze-cuckoo		C		1
animals	birds	Cuculidae	*Cuculus optatus*	oriental cuckoo		SL		1
animals	birds	Cuculidae	*Eudynamys orientalis*	eastern koel		C		3
animals	birds	Dicaeidae	*Dicaeum hirundinaceum*	mistletoebird		C		15
animals	birds	Dicruridae	*Dicrurus bracteatus*	spangled drongo		C		14
animals	birds	Estrildidae	*Lonchura castaneothorax*	chestnut-breasted mannikin		C		1
animals	birds	Estrildidae	*Neochmia temporalis*	red-browed finch		C		1
animals	birds	Falconidae	*Falco cenchroides*	nankeen kestrel		C		1
animals	birds	Hirundinidae	*Cecropis daurica*	red-rumped swallow		SL		4
animals	birds	Hirundinidae	*Hirundo neoxena*	welcome swallow		C		9
animals	birds	Hirundinidae	*Petrochelidon nigricans*	tree martin		C		2
animals	birds	Machaerirhynchidae	*Machaerirhynchus flaviventer*	yellow-breasted boatbill		C		2
animals	birds	Maluridae	*Malurus amabilis*	lovely fairy-wren		C		2

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animals	birds	Megapodiidae	*Alectura lathami*	Australian brush-turkey		C		3
animals	birds	Megapodiidae	*Megapodius reinwardt*	orange-footed scrubfowl		C		17
animals	birds	Meliphagidae	*Bolemoreus frenatus*	bridled honeyeater		C		1
animals	birds	Meliphagidae	*Entomyzon cyanotis*	blue-faced honeyeater		C		1
animals	birds	Meliphagidae	*Meliphaga notata*	yellow-spotted honeyeater		C		32
animals	birds	Meliphagidae	*Melithreptus albogularis*	white-throated honeyeater		C		1
animals	birds	Meliphagidae	*Melithreptus lunatus*	white-naped honeyeater		C		1
animals	birds	Meliphagidae	*Microptilotis gracilis*	graceful honeyeater		C		17
animals	birds	Meliphagidae	*Myzomela obscura*	dusky honeyeater		C		11
animals	birds	Meliphagidae	*Myzomela sanguinolenta*	scarlet honeyeater		C		1
animals	birds	Meliphagidae	*Philemon buceroides*	helmeted friarbird		C		7
animals	birds	Meliphagidae	*Philemon corniculatus*	noisy friarbird		C		1
animals	birds	Meliphagidae	*Ramsayornis modestus*	brown-backed honeyeater		C		13
animals	birds	Meliphagidae	*Stomiopera unicolor*	white-gaped honeyeater		C		1
animals	birds	Meliphagidae	*Xanthotis macleayanus*	Macleay's honeyeater		C		14
animals	birds	Meropidae	*Merops ornatus*	rainbow bee-eater		C		7
animals	birds	Monarchidae	*Arses kaupi*	pied monarch		C		3
animals	birds	Monarchidae	*Carterornis leucotis*	white-eared monarch		C		1
animals	birds	Monarchidae	*Grallina cyanoleuca*	magpie-lark		C		1
animals	birds	Monarchidae	*Monarcha melanopsis*	black-faced monarch		SL		2
animals	birds	Monarchidae	*Myiagra alecto*	shining flycatcher		C		13
animals	birds	Monarchidae	*Myiagra rubecula*	leaden flycatcher		C		4
animals	birds	Monarchidae	*Symposiachrus trivirgatus*	spectacled monarch		SL		22
animals	birds	Nectariniidae	*Cinnyris jugularis*	olive-backed sunbird		C		25
animals	birds	Oriolidae	*Oriolus flavocinctus*	green oriole		C		14
animals	birds	Oriolidae	*Oriolus sagittatus*	olive-backed oriole		C		2
animals	birds	Oriolidae	*Sphecotheres vieilloti*	Australasian figbird		C		7
animals	birds	Orthonychidae	*Orthonyx spaldingii*	chowchilla		C		2
animals	birds	Pachycephalidae	*Colluricincla harmonica*	grey shrike-thrush		C		2
animals	birds	Pachycephalidae	*Colluricincla megarhyncha*	little shrike-thrush		C		20
animals	birds	Pachycephalidae	*Pachycephala pectoralis*	golden whistler		C		2
animals	birds	Pachycephalidae	*Pachycephala simplex peninsulae*	grey whistler		C		7
animals	birds	Paradisaeidae	*Ptiloris victoriae*	Victoria's riflebird		C		6
animals	birds	Pelecanidae	*Pelecanus conspicillatus*	Australian pelican		C		1
animals	birds	Petroicidae	*Heteromyias cinereifrons*	grey-headed robin		C		1
animals	birds	Petroicidae	*Microeca flavigaster*	lemon-bellied flycatcher		C		2
animals	birds	Petroicidae	*Tregellasia capito*	pale-yellow robin		C		4
animals	birds	Phalacrocoracidae	*Microcarbo melanoleucos*	little pied cormorant		C		3
animals	birds	Phalacrocoracidae	*Phalacrocorax varius*	pied cormorant		C		1
animals	birds	Pittidae	*Pitta versicolor*	noisy pitta		C		6
animals	birds	Podargidae	*Podargus papuensis*	Papuan frogmouth		C		2
animals	birds	Psittaculidae	*Cyclopsitta diophthalma macleayana*	Macleay's fig-parrot		V		12
animals	birds	Psittaculidae	*Trichoglossus chlorolepidotus*	scaly-breasted lorikeet		C		2
animals	birds	Psittaculidae	*Trichoglossus moluccanus*	rainbow lorikeet		C		11
animals	birds	Ptilonorhynchidae	*Ailuroedus maculosus*	spotted catbird		C		12
animals	birds	Rallidae	*Fulica atra*	Eurasian coot		C		1

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animals	birds	Rallidae	*Rallina tricolor*	red-necked crake		C		3
animals	birds	Rallidae	*Zapornia tabuensis*	spotless crake		C		1
animals	birds	Rhipiduridae	*Rhipidura albiscapa*	grey fantail		C		3
animals	birds	Rhipiduridae	*Rhipidura rufifrons*	rufous fantail		SL		10
animals	birds	Rhipiduridae	*Rhipidura rufiventris*	northern fantail		C		1
animals	birds	Scolopacidae	*Actitis hypoleucos*	common sandpiper		SL		3
animals	birds	Scolopacidae	*Limosa lapponica baueri*	Western Alaskan bar-tailed godwit		V	E	1
animals	birds	Scolopacidae	*Numenius phaeopus*	whimbrel		SL		4
animals	birds	Strigidae	*Ninox boobook*	southern boobook		C		1
animals	birds	Strigidae	*Ninox rufa queenslandica*	rufous owl (southern subspecies)		C		1
animals	birds	Sturnidae	*Aplonis metallica*	metallic starling		C		9
animals	birds	Threskiornithidae	*Platalea flavipes*	yellow-billed spoonbill		C		3
animals	birds	Threskiornithidae	*Platalea regia*	royal spoonbill		C		2
animals	birds	Threskiornithidae	*Threskiornis molucca*	Australian white ibis		C		3
animals	birds	Threskiornithidae	*Threskiornis spinicollis*	straw-necked ibis		C		2
animals	birds	Turnicidae	*Turnix maculosus*	red-backed button-quail		C		1
animals	birds	Tytonidae	*Tyto tenebricosa multipunctata*	lesser sooty owl		C		2
animals	birds	Zosteropidae	*Zosterops lateralis*	silvereye		C		3
animals	insects	Megapodagrionidae	*Austroargiolestes aureus*	tropical flatwing				1
animals	insects	Nymphalidae	*Neptis praslini staudingereana*	yellow-eyed plane				1
animals	mammals	Macropodidae	*Dendrolagus bennettianus*	Bennett's tree-kangaroo		NT		3/2
animals	mammals	Macropodidae	*Thylogale stigmatica*	red-legged pademelon		C		1
animals	ray-finned fishes	Ambassidae	*Ambassis miops*	flagtail glassfish				1/1
animals	ray-finned fishes	Anguillidae	*Anguilla reinhardtii*	longfin eel				2/2
animals	ray-finned fishes	Apogonidae	*Glossamia aprion*	mouth almighty				1/1
animals	ray-finned fishes	Eleotridae	*Hypseleotris compressa*	empire gudgeon				5/5
animals	ray-finned fishes	Gobiidae	*Redigobius bikolanus*	speckled goby				1/1
animals	ray-finned fishes	Gobiidae	*Redigobius chrysosoma*	spotfin goby				1/1
animals	ray-finned fishes	Lutjanidae	*Lutjanus argentimaculatus*	mangrove jack				1/1
animals	ray-finned fishes	Megalopidae	*Megalops cyprinoides*	oxeye herring				1/1
animals	ray-finned fishes	Melanotaeniidae	*Melanotaenia maccullochi*	McCulloch's rainbowfish				3/3
animals	ray-finned fishes	Melanotaeniidae	*Melanotaenia splendida splendida*	eastern rainbowfish				4/4
animals	ray-finned fishes	Plotosidae	*Tandanus tropicanus*					2/2
animals	ray-finned fishes	Pseudomugilidae	*Pseudomugil signifer*	Pacific blue eye				4/4
animals	reptiles	Agamidae	*Lophosaurus boydii*	Boyd's forest dragon		C		2
animals	reptiles	Boidae	*Simalia kinghorni*	amethystine python (Australian form)		C		1
animals	reptiles	Carphodactylidae	*Saltuarius cornutus*	northern leaf-tailed gecko		C		2
animals	reptiles	Colubridae	*Boiga irregularis*	brown tree snake		C		1
animals	reptiles	Crocodylidae	*Crocodylus porosus*	estuarine crocodile		V		2
animals	reptiles	Gekkonidae	*Lepidodactylus lugubris*	mourning gecko		C		2
animals	reptiles	Scincidae	*Bellatorias frerei*	major skink		C		2
animals	uncertain	Indeterminate	*Indeterminate*	Unknown or Code Pending				3
chromists	brown algae	Dictyotaceae	*Dictyotopsis propagulifera*			C		1/1
fungi	Agaricomycetes	Mesophelliaceae	*Gummiglobus joyceae*			C		1/1
fungi	lecanoromycetes	Parmeliaceae	*Usnea baileyi*			C		1/1
fungi	lecanoromycetes	Parmeliaceae	*Usnea nidifica*			C		3/3

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fungi	lecanoromycetes	Porinaceae	*Porina elixiana*			C		1/1
fungi	lecanoromycetes	Porinaceae	*Porina papuensis*			C		1/1
fungi	lecanoromycetes	Ramalinaceae	*Ramalina subfraxinea var. subfraxinea*			C		3/3
plants	land plants	Achariaceae	*Ryparosa kurrangii*			NT		1/1
plants	land plants	Annonaceae	*Cananga odorata*	Ylang-ylang		C		1/1
plants	land plants	Annonaceae	*Polyalthia xanthocarpa*			C		1/1
plants	land plants	Annonaceae	*Pseuduvaria froggattii*			C		1/1
plants	land plants	Apiaceae	*Centella asiatica*			C		1/1
plants	land plants	Apocynaceae	*Cerbera floribunda*			C		1/1
plants	land plants	Apocynaceae	*Kopsia arborea*			C		1/1
plants	land plants	Apocynaceae	*Leichhardtia glandulifera*			C		1/1
plants	land plants	Apocynaceae	*Melodinus acutiflorus*	bellbird vine		C		4/4
plants	land plants	Apocynaceae	*Parsonsia langiana*			C		1/1
plants	land plants	Apocynaceae	*Parsonsia latifolia*	green-leaved silkpod		C		1/1
plants	land plants	Aquifoliaceae	*Ilex arnhemensis subsp. ferdinandi*			C		1/1
plants	land plants	Araliaceae	*Polyscias elegans*	celery wood		C		1/1
plants	land plants	Arecaceae	*Calamus australis*	hairy Mary		C		1/1
plants	land plants	Arecaceae	*Calamus vitiensis*			C		2/2
plants	land plants	Atherospermataceae	*Doryphora aromatica*			C		1/1
plants	land plants	Bignoniaceae	*Pandorea nervosa*			C		1/1
plants	land plants	Blechnaceae	*Blechnum orientale*			SL		1/1
plants	land plants	Blechnaceae	*Stenochlaena palustris*	climbing swamp fern		SL		1/1
plants	land plants	Byttneriaceae	*Melochia corchorifolia*			C		1/1
plants	land plants	Calymperaceae	*Calymperes moluccense*			C		1/1
plants	land plants	Cardiopteridaceae	*Cardiopteris moluccana*			SL		1/1
plants	land plants	Casuarinaceae	*Allocasuarina littoralis*			C		1/1
plants	land plants	Celastraceae	*Salacia chinensis*			C		6/6
plants	land plants	Connaraceae	*Rourea brachyandra*			C		1/1
plants	land plants	Convolvulaceae	*Decalobanthus peltatus*			C		1/1
plants	land plants	Convolvulaceae	*Erycibe coccinea*			C		1/1
plants	land plants	Convolvulaceae	*Ipomoea littoralis*			C		1/1
plants	land plants	Costaceae	*Cheilocostus potierae*			E		1/1
plants	land plants	Cunoniaceae	*Gillbeea whypalland*			C		2/2
plants	land plants	Cyperaceae	*Cyperus distans*			C		1/1
plants	land plants	Cyperaceae	*Cyperus pilosus*			C		1/1
plants	land plants	Cyperaceae	*Fimbristylis littoralis*			C		2/2
plants	land plants	Cyperaceae	*Fimbristylis schoenoides*			C		2/2
plants	land plants	Cyperaceae	*Gahnia sieberiana*	sword grass		C		1/1
plants	land plants	Cyperaceae	*Hypolytrum compactum*			C		1/1
plants	land plants	Cyperaceae	*Hypolytrum nemorum*			C		2/2
plants	land plants	Cyperaceae	*Machaerina rubiginosa*			C		2/2
plants	land plants	Cyperaceae	*Mapania macrocephala*			C		1/1
plants	land plants	Cyperaceae	*Rhynchospora brownii*	beak rush		C		1/1
plants	land plants	Cyperaceae	*Rhynchospora corymbosa*			C		3/3
plants	land plants	Cyperaceae	*Rhynchospora leae*			C		1/1
plants	land plants	Cyperaceae	*Rhynchospora rubra*			C		1/1

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plants	land plants	Cyperaceae	*Schoenus calostachyus*			C		2/2
plants	land plants	Cyperaceae	*Schoenus sparteus*			C		1/1
plants	land plants	Cyperaceae	*Scirpodendron ghaeri*			C		2/2
plants	land plants	Cyperaceae	*Scleria ciliaris*			C		1/1
plants	land plants	Cyperaceae	*Scleria levis*			C		1/1
plants	land plants	Cyperaceae	*Scleria polycarpa*			C		3/3
plants	land plants	Cyperaceae	*Scleria scrobiculata*			C		2/2
plants	land plants	Cyperaceae	*Scleria sumatrensis*			C		1/1
plants	land plants	Cyperaceae	*Scleria terrestris*			C		1/1
plants	land plants	Dilleniaceae	*Tetracera daemeliana*			C		1/1
plants	land plants	Dracaenaceae	*Dracaena angustifolia*			C		1/1
plants	land plants	Dryopteridaceae	*Bolbitis taylorii*			SL		2/2
plants	land plants	Ebenaceae	*Diospyros uvida*			C		1/1
plants	land plants	Elaeocarpaceae	*Aceratium concinnum*			C		1/1
plants	land plants	Elaeocarpaceae	*Aceratium megalospermum*			C		2/2
plants	land plants	Elaeocarpaceae	*Elaeocarpus foveolatus*			C		2/2
plants	land plants	Elaeocarpaceae	*Elaeocarpus grahamii*			C		2/2
plants	land plants	Elaeocarpaceae	*Elaeocarpus grandis*	blue quandong		C		1/1
plants	land plants	Elaeocarpaceae	*Elaeocarpus michaelii*			C		4/3
plants	land plants	Eriocaulaceae	*Eriocaulon willdenovianum*			C		1/1
plants	land plants	Euphorbiaceae	*Croton triacros*			C		2/2
plants	land plants	Euphorbiaceae	*Excoecaria agallocha*	milky mangrove		C		2/2
plants	land plants	Euphorbiaceae	*Macaranga involucrata var. mallotoides*			C		1/1
plants	land plants	Euphorbiaceae	*Macaranga polyadenia*			C		2/2
plants	land plants	Euphorbiaceae	*Macaranga subdentata*			C		1/1
plants	land plants	Euphorbiaceae	*Mallotus mollissimus*			C		1/1
plants	land plants	Euphorbiaceae	*Mallotus paniculatus*			C		1/1
plants	land plants	Flagellariaceae	*Flagellaria indica*	whip vine		C		2/2
plants	land plants	Gentianaceae	*Fagraea cambagei*			C		2/2
plants	land plants	Gesneriaceae	*Lenbrassia australiana var. australiana*			SL		1/1
plants	land plants	Gesneriaceae	*Lenbrassia australiana var. glabrescens*			SL		3/3
plants	land plants	Gleicheniaceae	*Dicranopteris linearis var. altissima*			C		1/1
plants	land plants	Goodeniaceae	*Goodenia mystrophylla*			C		1/1
plants	land plants	Hernandiaceae	*Hernandia albiflora*			C		6/6
plants	land plants	Hymenophyllaceae	*Cephalomanes atrovirens*			SL		1/1
plants	land plants	Hymenophyllaceae	*Crepidomanes aphlebioides*			CR		2/2
plants	land plants	Hymenophyllaceae	*Vandenboschia johnstonensis*			SL		1/1
plants	land plants	Lamiaceae	*Clerodendrum floribundum*			C		1/1
plants	land plants	Lamiaceae	*Gmelina fasciculiflora*			C		1/1
plants	land plants	Lamiaceae	*Premna serratifolia*			C		1/1
plants	land plants	Lamiaceae	*Vitex queenslandica*			C		2/2
plants	land plants	Lauraceae	*Beilschmiedia bancroftii*			C		2/2
plants	land plants	Lauraceae	*Beilschmiedia castrisinensis*			NT		3/3
plants	land plants	Lauraceae	*Beilschmiedia volckii*	Boonjee blush walnut		C		1/1
plants	land plants	Lauraceae	*Cryptocarya corrugata*			C		1/1
plants	land plants	Lauraceae	*Cryptocarya grandis*			C		3/3

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plants	land plants	Lauraceae	*Cryptocarya mackinnoniana*			C		1/1
plants	land plants	Lauraceae	*Cryptocarya oblata*			C		2/2
plants	land plants	Lauraceae	*Endiandra compressa*			C		1/1
plants	land plants	Lauraceae	*Endiandra grayi*			V		3/3
plants	land plants	Lauraceae	*Endiandra hypotephra*	blue walnut		C		1/1
plants	land plants	Lauraceae	*Endiandra insignis*			C		2/2
plants	land plants	Lauraceae	*Endiandra leptodendron*			C		2/2
plants	land plants	Lauraceae	*Endiandra longipedicellata*			C		1/1
plants	land plants	Lauraceae	*Endiandra microneura*			NT		4/4
plants	land plants	Lauraceae	*Endiandra monothyra subsp. monothyra*			C		1/1
plants	land plants	Lauraceae	*Endiandra wolfei*			C		4/4
plants	land plants	Lauraceae	*Lindera queenslandica*			C		1/1
plants	land plants	Lauraceae	*Litsea leefeana*			C		2/2
plants	land plants	Lecythidaceae	*Barringtonia racemosa*			C		1/1
plants	land plants	Leguminosae	*Acacia celsa*			C		1/1
plants	land plants	Leguminosae	*Acacia crassicarpa*			C		1/1
plants	land plants	Leguminosae	*Acacia mangium*			C		4/4
plants	land plants	Leguminosae	*Cynometra iripa*			C		2/2
plants	land plants	Leguminosae	*Dalbergia candenatensis*			C		1/1
plants	land plants	Leguminosae	*Derris*					2/2
plants	land plants	Leguminosae	*Derris trifoliata*			C		2/1
plants	land plants	Leguminosae	*Dioclea hexandra*			E		1/1
plants	land plants	Leguminosae	*Entada phaseoloides*	matchbox bean		C		1/1
plants	land plants	Leguminosae	*Ormosia ormondii*			C		1/1
plants	land plants	Leguminosae	*Ticanto crista*			C		1/1
plants	land plants	Lentibulariaceae	*Utricularia caerulea*	blue bladderwort		SL		1/1
plants	land plants	Lentibulariaceae	*Utricularia uliginosa*	asian bladderwort		SL		2/2
plants	land plants	Lindsaeaceae	*Lindsaea brachypoda*			C		2/2
plants	land plants	Lindsaeaceae	*Lindsaea ensifolia subsp. ensifolia*			C		1/1
plants	land plants	Lindsaeaceae	*Lindsaea media*			C		1/1
plants	land plants	Lindsaeaceae	*Lindsaea repens var. sessilis*			C		1/1
plants	land plants	Loganiaceae	*Geniostoma rupestre var. australianum*			C		1/1
plants	land plants	Loganiaceae	*Mitrasacme oasena*			C		1/1
plants	land plants	Loranthaceae	*Amyema conspicua subsp. conspicua*			C		1/1
plants	land plants	Loranthaceae	*Amyema quaternifolia*			C		3/3
plants	land plants	Loranthaceae	*Amylotheca dictyophleba*			C		1/1
plants	land plants	Loranthaceae	*Dendrophthoe curvata*			C		1/1
plants	land plants	Loranthaceae	*Diplatia tomentosa*			C		1/1
plants	land plants	Lygodiaceae	*Lygodium microphyllum*	snake fern		C		1/1
plants	land plants	Lygodiaceae	*Lygodium reticulatum*			C		2/2
plants	land plants	Lythraceae	*Sonneratia alba*			C		2/1
plants	land plants	Lythraceae	*Sonneratia caseolaris*			C		2/1
plants	land plants	Malvaceae	*Thespesia*					1
plants	land plants	Malvaceae	*Thespesia populnea*			C		1/1
plants	land plants	Melastomataceae	*Medinilla balls-headleyi*			C		1/1
plants	land plants	Meliaceae	*Prasoxylon klanderi*			C		1/1

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plants	land plants	Menispermaceae	*Hypserpa laurina*			C		2/2
plants	land plants	Monimiaceae	*Steganthera laxiflora subsp. laxiflora*			C		1/1
plants	land plants	Monimiaceae	*Wilkiea pubescens*			C		1/1
plants	land plants	Moraceae	*Ficus benjamina*			C		1/1
plants	land plants	Moraceae	*Ficus copiosa*			C		1/1
plants	land plants	Moraceae	*Ficus pantoniana*			C		1/1
plants	land plants	Moraceae	*Ficus septica*			C		2/2
plants	land plants	Moraceae	*Ficus variegata var. variegata*			C		1/1
plants	land plants	Myrsinaceae	*Ardisia pachyrrhachis*			C		1/1
plants	land plants	Myrsinaceae	*Embelia caulialata*			C		1/1
plants	land plants	Myrtaceae	*Archirhodomyrtus beckleri*	rose myrtle		C		2/2
plants	land plants	Myrtaceae	*Eucalyptus pellita*	large-fruited red mahogany		C		1/1
plants	land plants	Myrtaceae	*Melaleuca cajuputi subsp. platyphylla*			C		6/6
plants	land plants	Myrtaceae	*Melaleuca leucadendra*	broad-leaved tea-tree		C		1/1
plants	land plants	Myrtaceae	*Rhodomyrtus effusa*			E		1/1
plants	land plants	Myrtaceae	*Rhodomyrtus pervagata*			E		1/1
plants	land plants	Myrtaceae	*Syzygium cormiflorum*	bumpy satinash		C		1/1
plants	land plants	Myrtaceae	*Syzygium fibrosum*	fibrous satinash		C		1/1
plants	land plants	Myrtaceae	*Syzygium monospermum*			C		1/1
plants	land plants	Oleaceae	*Jasminum didymum*			C		1/1
plants	land plants	Ophioglossaceae	*Ophioderma pendula*			C		1/1
plants	land plants	Orchidaceae	*Apostasia wallichii*			SL		1/1
plants	land plants	Orchidaceae	*Dendrobium discolor*			SL		1/1
plants	land plants	Pandanaceae	*Benstonea monticola*			C		1/1
plants	land plants	Pandanaceae	*Freycinetia excelsa*	climbing pandanus		C		1/1
plants	land plants	Pandanaceae	*Freycinetia marginata*			E		3/3
plants	land plants	Pandanaceae	*Freycinetia scandens*			C		1/1
plants	land plants	Phyllanthaceae	*Antidesma erostre*			C		1/1
plants	land plants	Phyllanthaceae	*Bischofia javanica*			C		1/1
plants	land plants	Phyllanthaceae	*Breynia*					1/1
plants	land plants	Phyllanthaceae	*Breynia cernua*			C		1/1
plants	land plants	Phyllanthaceae	*Cleistanthus myrianthus*			C		3/3
plants	land plants	Phyllanthaceae	*Glochidion*					1/1
plants	land plants	Phyllanthaceae	*Phyllanthus*					1/1
plants	land plants	Phyllanthaceae	*Phyllanthus clamboides*			C		1/1
plants	land plants	Piperaceae	*Piper hederaceum var. hederaceum*			C		1/1
plants	land plants	Piperaceae	*Piper macropiper*			C		1/1
plants	land plants	Pittosporaceae	*Pittosporum rubiginosum*			C		1/1
plants	land plants	Plantaginaceae	*Limnophila fragrans*			C		1/1
plants	land plants	Poaceae	*Centotheca lappacea*			C		2/2
plants	land plants	Poaceae	*Centotheca philippinensis*	creek grass		C		1/1
plants	land plants	Poaceae	*Coelachne pulchella*			C		1/1
plants	land plants	Poaceae	*Cyrtococcum oxyphyllum*			C		1/1
plants	land plants	Poaceae	*Eulalia trispicata*			C		1/1
plants	land plants	Poaceae	*Garnotia stricta var. longiseta*			C		1/1
plants	land plants	Poaceae	*Isachne confusa*			C		1/1

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
plants	land plants	Poaceae	*Isachne sharpii*			E		2/2
plants	land plants	Poaceae	*Lophatherum gracile*			C		2/2
plants	land plants	Poaceae	*Oplismenus compositus*			C		1/1
plants	land plants	Poaceae	*Oplismenus imbecillis*			C		1/1
plants	land plants	Poaceae	*Ottochloa nodosa*			C		1/1
plants	land plants	Poaceae	*Sacciolepis indica*	Indian cupscale grass		C		1/1
plants	land plants	Podocarpaceae	*Podocarpus grayae*			C		3/3
plants	land plants	Polygalaceae	*Xanthophyllum fragrans*			NT		1/1
plants	land plants	Polygalaceae	*Xanthophyllum octandrum*			C		1/1
plants	land plants	Polygonaceae	*Persicaria barbata*			C		1/1
plants	land plants	Polygonaceae	*Persicaria dichotoma*			C		1/1
plants	land plants	Polypodiaceae	*Pyrrosia longifolia*			SL		3/3
plants	land plants	Proteaceae	*Grevillea baileyana*			C		1/1
plants	land plants	Proteaceae	*Helicia nortoniana*			C		1/1
plants	land plants	Psilotaceae	*Psilotum nudum*	skeleton fork fern		SL		1/1
plants	land plants	Pteridaceae	*Acrostichum aureum*	golden mangrove fern		SL		1/1
plants	land plants	Pteridaceae	*Acrostichum speciosum*	mangrove fern		SL		2/2
plants	land plants	Rhamnaceae	*Sageretia hamosa*			C		2/2
plants	land plants	Rosaceae	*Prunus turneriana*	almondbark		C		2/2
plants	land plants	Rosaceae	*Rubus moluccanus var. moluccanus*			C		1/1
plants	land plants	Rubiaceae	*Cyclophyllum rostellatum*			C		1/1
plants	land plants	Rubiaceae	*Exallage lapeyrousei*			C		1/1
plants	land plants	Rubiaceae	*Exallage radicans*			C		1/1
plants	land plants	Rubiaceae	*Geophila repens*			C		1/1
plants	land plants	Rubiaceae	*Gynochthodes sessilis*			C		1/1
plants	land plants	Rubiaceae	*Hedyotis novoguineensis*			E		3/3
plants	land plants	Rubiaceae	*Lasianthus chlorocarpus*			C		1/1
plants	land plants	Rubiaceae	*Morinda citrifolia*			C		1/1
plants	land plants	Rubiaceae	*Nauclea orientalis*	Leichhardt tree		C		1/1
plants	land plants	Rubiaceae	*Neonauclea glabra*			C		1/1
plants	land plants	Rubiaceae	*Ophiorrhiza australiana subsp. australiana*			C		1/1
plants	land plants	Rubiaceae	*Psychotria coelospermum*			C		4/4
plants	land plants	Rubiaceae	*Psychotria sp. (Mt Lewis V.K.Moriarty 2445)*			C		2/2
plants	land plants	Rubiaceae	*Randia audasii*			NT		2/2
plants	land plants	Rubiaceae	*Uncaria lanosa var. appendiculata*			C		1/1
plants	land plants	Rubiaceae	*Wendlandia inclusa*			C		3/3
plants	land plants	Rubiaceae	*Wendlandia urceolata*			C		1/1
plants	land plants	Rutaceae	*Acronychia acronychioides*			C		1/1
plants	land plants	Rutaceae	*Acronychia acuminata*			NT		4/4
plants	land plants	Rutaceae	*Melicope broadbentiana*			C		1/1
plants	land plants	Rutaceae	*Melicope xanthoxyloides*			C		1/1
plants	land plants	Salicaceae	*Casearia dallachii*			C		1/1
plants	land plants	Salicaceae	*Homalium sp. (Johnstone River N.Michael 176)*			C		3/2
plants	land plants	Santalaceae	*Notothixos leiophyllus*			C		1/1
plants	land plants	Sapindaceae	*Allophylus cobbe*			C		3/3
plants	land plants	Sapindaceae	*Arytera pauciflora*			C		1/1

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
plants	land plants	Sapindaceae	*Castanospora alphandii*	brown tamarind		C		1/1
plants	land plants	Sapindaceae	*Diploglottis bernieana*			C		2/2
plants	land plants	Sapindaceae	*Harpullia arborea*	Cooktown tulipwood		C		3/3
plants	land plants	Sapindaceae	*Harpullia rhyticarpa*			C		1/1
plants	land plants	Sapindaceae	*Jagera madida*			C		3/3
plants	land plants	Sapindaceae	*Mischocarpus albescens*			NT		3/3
plants	land plants	Sapindaceae	*Mischocarpus exangulatus*			C		2/2
plants	land plants	Sapindaceae	*Sapindaceae*					2/2
plants	land plants	Sapindaceae	*Sarcotoechia villosa*			C		1/1
plants	land plants	Sapotaceae	*Niemeyera prunifera*			C		1/1
plants	land plants	Sapotaceae	*Palaquium galactoxylon*			C		1/1
plants	land plants	Sapotaceae	*Van-royena castanosperma*			C		3/3
plants	land plants	Schizaeaceae	*Actinostachys digitata*			SL		1/1
plants	land plants	Smilacaceae	*Smilax aculeatissima*			C		1/1
plants	land plants	Solanaceae	*Solanum magnifolium*			C		1/1
plants	land plants	Stemonuraceae	*Gomphandra australiana*			C		3/3
plants	land plants	Sterculiaceae	*Argyrodendron peralatum*	red tulip oak		C		1/1
plants	land plants	Sterculiaceae	*Sterculia quadrifida*	peanut tree		C		1/1
plants	land plants	Symplocaceae	*Symplocos cyanocarpa var. cyanocarpa*			C		1/1
plants	land plants	Symplocaceae	*Symplocos paucistaminea*			C		1/1
plants	land plants	Tectariaceae	*Tectaria confluens*			C		1/1
plants	land plants	Thelypteridaceae	*Chingia australis*			E	E	2/2
plants	land plants	Urticaceae	*Pouzolzia zeylanica*			C		2/2
plants	land plants	Vitaceae	*Causonis australasica*			C		1/1
plants	land plants	Vitaceae	*Cissus repens*			C		1/1
plants	land plants	Xyridaceae	*Xyris complanata*	yellow-eye		C		1/1
plants	land plants	Zamiaceae	*Lepidozamia hopei*	Hope's cycad		SL		1/1
plants	land plants	Zingiberaceae	*Pleuranthodium racemigerum*			C		1/1

CODES

I - Y indicates that the taxon is introduced to Queensland and has naturalised.

Q - Indicates the Queensland conservation status of each taxon under the *Nature Conservation Act 1992*.
The codes are Extinct (EX), Extinct in the Wild (PE), Critically Endangered (CR), Endangered (E), Vulnerable (V), Near Threatened (NT), Special Least Concern (SL) and Least Concern (C).

A - Indicates the Australian conservation status of each taxon under the *Environment Protection and Biodiversity Conservation Act 1999*.
The values of EPBC are Extinct (EX), Extinct in the Wild (XW), Critically Endangered (CE), Endangered (E), Vulnerable (V) and Conservation Dependent (CD).

Records - The first number indicates the total number of records of the taxon (wildlife records and species listings for selected areas).
This number is output as 99999 if it equals or exceeds this value. A second number located after a / indicates the number of specimen records for the taxon.
This number is output as 999 if it equals or exceeds this value.

Appendix C Matters of State Environmental Significance

Queensland Government

Department of Environment, Science and Innovation

Environmental Reports

Matters of State Environmental Significance

For the selected area of interest

Longitude: 145.39824 Latitude: -16.25959 with 2 kilometre radius

Environmental Reports - General Information

The Environmental Reports portal provides for the assessment of selected matters of interest relevant to a user specified location, or area of interest (AOI). All area and derivative figures are relevant to the extent of matters of interest contained within the AOI unless otherwise stated. Please note, if a user selects an AOI via the "central coordinates" option, the resulting assessment area encompasses an area extending for a 2km radius from the point of interest.

All area and area derived figures included in this report have been calculated via reprojecting relevant spatial features to Albers equal-area conic projection (central meridian = 146, datum Geocentric Datum of Australia 1994). As a result, area figures may differ slightly if calculated for the same features using a different co-ordinate system.

Figures in tables may be affected by rounding.

The matters of interest reported on in this document are based upon available state mapped datasets. Where the report indicates that a matter of interest is not present within the AOI (e.g. where area related calculations are equal to zero, or no values are listed), this may be due either to the fact that state mapping has not been undertaken for the AOI, that state mapping is incomplete for the AOI, or that no values have been identified within the site.

The information presented in this report should be considered as a guide only and a field survey may be required to validate values on the ground.

Please direct queries about these reports to: Planning.Support@des.qld.gov.au

Disclaimer

Whilst every care is taken to ensure the accuracy of the information provided in this report, the Queensland Government makes no representations or warranties about its accuracy, reliability, completeness, or suitability, for any particular purpose and disclaims all responsibility and all liability (including without limitation, liability in negligence) for all expenses, losses, damages (including indirect or consequential damage) and costs which the user may incur as a consequence of the information being inaccurate or incomplete in any way and for any reason.



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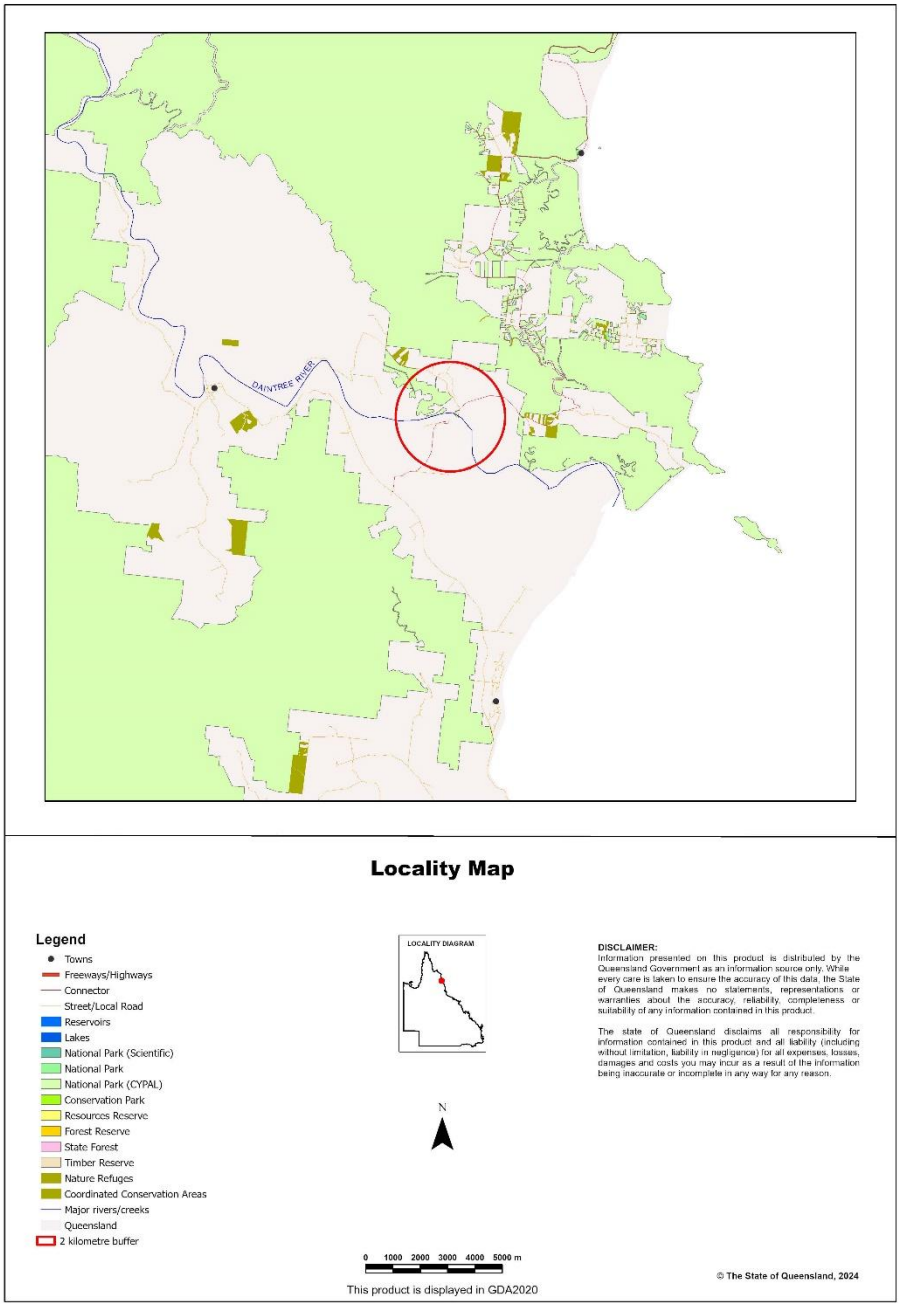
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Assessment Area Details

The following table provides an overview of the area of interest (AOI) with respect to selected topographic and environmental values.

Table 1: Summary table, details for AOI: Longitude: 145.39824 Latitude: -16.25959 with 2 kilometre radius, with area 1256.64 ha

Local Government(s)	Catchment(s)	Bioregion(s)	Subregion(s)
Douglas Shire	Daintree	Wet Tropics	Daintree - Bloomfield



Matters of State Environmental Significance (MSES)

MSES Categories

Queensland's State Planning Policy (SPP) includes a biodiversity State interest that states:

'The sustainable, long-term conservation of biodiversity is supported. Significant impacts on matters of national or state environmental significance are avoided, or where this cannot be reasonably achieved; impacts are minimised and residual impacts offset.'

The MSES mapping product is a guide to assist implementation of the SPP biodiversity policy. While it supports the SPP, the mapping does not replace the regulatory mapping or environmental values specifically called up under other laws or regulations.

The SPP defines matters of state environmental significance as:

- Protected areas (including all classes of protected area except coordinated conservation areas) under the*Nature Conservation Act 1992*;

- *Marine parks and land within a 'marine national park', 'conservation park', 'scientific research', 'preservation' or 'buffer' zone under theMarine Parks Act 2004* ;

- *Areas within declared fish habitat areas that are management A areas or management B areas under the Fisheries Regulation 2008;*

- *Threatened wildlife under the Nature Conservation Act 1992* and special least concern animals under the Nature Conservation (Wildlife) Regulation 2006;

- Regulated vegetation under the *Vegetation Management Act 1999* that is:

  - Category B areas on the regulated vegetation management map, that are 'endangered' or 'of concern' regional ecosystems;
  - Category C areas on the regulated vegetation management map that are 'endangered' or 'of concern' regional ecosystems;
  - Category R areas on the regulated vegetation management map;
  - Regional ecosystems that intersect with watercourses identified on the vegetation management watercourse and drainage feature map;
  - Regional ecosystems that intersect with wetlands identified on the vegetation management wetlands map;

- Strategic Environmental Areas under the *Regional Planning Interests Act 2014* ;

- Wetlands in a wetland protection area of wetlands of high ecological significance shown on the Map of Queensland Wetland Environmental Values under the Environment Protection Regulation 2019;

- Wetlands and watercourses in high ecological value waters defined in the Environmental Protection (Water) Policy 2009, schedule 2;
- Legally secured offset areas.

MSES Values Present

The MSES values that are present in the area of interest are summarised in the table below:

Table 2: Summary of MSES present within the AOI

1a Protected Areas- estates	114.83 ha	9.1%
1b Protected Areas- nature refuges	0 ha	0.0%
1c Protected Areas- special wildlife reserves	0 ha	0.0%
2 State Marine Parks- highly protected zones	181.91 ha	14.5%
3 Fish habitat areas (A and B areas)	0 ha	0.0%
4 Strategic Environmental Areas (SEA)	0 ha	0.0%
5 High Ecological Significance wetlands on the Map of Queensland Wetland Environmental Values	237.84 ha	18.9%
6a High Ecological Value (HEV) wetlands	98.74 ha	7.9%
6b High Ecological Value (HEV) waterways	1.1 km	Not applicable
7a Threatened (endangered or vulnerable) wildlife	730.69 ha	58.1%
7b Special least concern animals	315.44 ha	25.1%
7c i Koala habitat area - core (SEQ)	0 ha	0.0%
7c ii Koala habitat area - locally refined (SEQ)	0 ha	0.0%
7d Sea turtle nesting areas	0 km	Not applicable
8a Regulated Vegetation - Endangered/Of concern in Category B (remnant)	217.45 ha	17.3%
8b Regulated Vegetation - Endangered/Of concern in Category C (regrowth)	48.9 ha	3.9%
8c Regulated Vegetation - Category R (GBR riverine regrowth)	42.57 ha	3.4%
8d Regulated Vegetation - Essential habitat	732.64 ha	58.3%
8e Regulated Vegetation - intersecting a watercourse	27.5 km	Not applicable
8f Regulated Vegetation - within 100m of a Vegetation Management Wetland	428.04 ha	34.1%
9a Legally secured offset areas- offset register areas	0 ha	0.0%
9b Legally secured offset areas- vegetation offsets through a Property Map of Assessable Vegetation	0 ha	0.0%

Additional Information with Respect to MSES Values Present

MSES - State Conservation Areas

1a. Protected Areas - estates

Estate name
Daintree National Park

1b. Protected Areas - nature refuges

(No results)

1c. Protected Areas - special wildlife reserves

(No results)

2. State Marine Parks - highly protected zones

Marine Park Name	Zone
Great Barrier Reef Coast Marine Park	Conservation Park Zone

3. Fish habitat areas (A and B areas)

(No results)

Refer to **Map 1 - MSES - State Conservation Areas** for an overview of the relevant MSES.

MSES - Wetlands and Waterways

4. Strategic Environmental Areas (SEA)

(No results)

5. High Ecological Significance wetlands on the Map of Queensland Wetland Environmental Values

Natural wetlands that are 'High Ecological Significance' (HES) on the Map of Queensland Wetland Environmental Values are present.

6a. Wetlands in High Ecological Value (HEV) waters

Natural wetlands that occur in HEV (maintain) freshwater and estuarine areas under the Environmental Protection (water) Policy are present.

6b. Waterways in High Ecological Value (HEV) waters

Natural waterways that occur in HEV (maintain) freshwater and estuarine areas under the Environmental Protection (water) Policy are present.

Refer to **Map 2 - MSES - Wetlands and Waterways** for an overview of the relevant MSES.

MSES - Species

7a. Threatened (endangered or vulnerable) wildlife

Values are present

7b. Special least concern animals

Values are present

7c i. Koala habitat area - core (SEQ)

Not applicable

7c ii. Koala habitat area - locally refined (SEQ)

Not applicable

7d. Wildlife habitat (sea turtle nesting areas)

Not applicable

Threatened (endangered or vulnerable) wildlife habitat suitability models

Species	Common name	NCA status	Presence
Boronia keysii	Keys boronia	V	None
Calyptorhynchus lathami	Glossy black cockatoo	V	None
Casuarius casuarius johnsonii	Sthn population cassowary	E	Core
Crinia tinnula	Wallum froglet	V	None
Denisonia maculata	Ornamental snake	V	None
Euastacus bindal	Mount Elliot crayfish	CR	None
Euastacus binzayedi		CR	None
Euastacus eungella		E	None
Euastacus hystricosus		E	None
Euastacus jagara	Jagara hairy crayfish	CR	None
Euastacus maidae		CR	None
Euastacus monteithorum		E	None
Euastacus robertsi		E	None
Taudactylus pleione	Kroombit tinkerfrog	E	None
Litoria freycineti	Wallum rocketfrog	V	None
Litoria olongburensis	Wallum sedgefrog	V	None
Macadamia integrifolia		V	None
Melaleuca irbyana	swamp tea-tree	E	None
Macadamia ternifolia		V	None
Macadamia tetraphylla	bopple nut	V	None
Petrogale penicillata	brush-tailed rock-wallaby	V	None
Petrogale coenensis	Cape York rock-wallaby	V	None
Petrogale purpureicollis	purple-necked rock-wallaby	V	None
Petrogale sharmani	Sharmans rock-wallaby	V	None
Petrogale xanthopus celeris	yellow-footed rock-wallaby (Qld subspecies)	V	None
Petaurus gracilis	Mahogany Glider	E	None
Petrogale persephone	Proserpine rock-wallaby	E	None
Phascolarctos cinereus	Koala - outside SEQ*	E	None
Pezoporus wallicus wallicus	Eastern ground parrot	V	None
Xeromys myoides	Water Mouse	V	None

*For koala model, this includes areas outside SEQ. Check 7c SEQ koala habitat for presence/absence.

Threatened (endangered or vulnerable) wildlife species records

Scientific name	Common name	NCA status	EPBC status	Migratory status
Crocodylus porosus	estuarine crocodile	V	None	M-B/E
Pteropus conspicillatus	spectacled flying-fox	E	E	None
Dasyurus maculatus gracilis	spotted-tailed quoll (northern subspecies)	E	E	None
Cyclopsitta diophthalma macleayana	Macleay's fig-parrot	V	None	None
Rhodomyrtus effusa		E	None	None
Endiandra grayi		V	None	None
Isachne sharpii		E	None	None

Special least concern animal species records

Scientific name	Common name	Migratory status
Numenius phaeopus	whimbrel	M-C/J/R/B/E
Gallinago hardwickii	Latham's snipe	M-J/R/B/E
Calidris acuminata	sharp-tailed sandpiper	M-C/J/R/B/E
Actitis hypoleucos	common sandpiper	M-C/J/R/B/E

Shorebird habitat (critically endangered/endangered/vulnerable)

Not applicable

Shorebird habitat (special least concern)

Not applicable

**Nature Conservation Act 1992 (NCA) Status- Endangered (E), Vulnerable (V) or Special Least Concern Animal (SL). Environment Protection and Biodiversity Conservation Act 1999 (EPBC) status: Critically Endangered (CE) Endangered (E), Vulnerable (V)*

Migratory status (M) - China and Australia Migratory Bird Agreement (C), Japan and Australia Migratory Bird Agreement (J), Republic of Korea and Australia Migratory Bird Agreement (R), Bonn Migratory Convention (B), Eastern Flyway (E)

To request a species list for an area, or search for a species profile, access Wildlife Online at:

https://www.qld.gov.au/environment/plants-animals/species-list/

Refer to **Map 3a - MSES - Species - Threatened (endangered or vulnerable) wildlife and special least concern animals** and **Map 3b - MSES - Species - Koala habitat area (SEQ)** and **Map 3c - MSES - Wildlife habitat (sea turtle nesting areas)** for an overview of the relevant MSES.

MSES - Regulated Vegetation

For further information relating to regional ecosystems in general, go to:

https://www.qld.gov.au/environment/plants-animals/plants/ecosystems/

For a more detailed description of a particular regional ecosystem, access the regional ecosystem search page at:

https://environment.ehp.qld.gov.au/regional-ecosystems/

8a. Regulated Vegetation - Endangered/Of concern in Category B (remnant)

Regional ecosystem	Vegetation management polygon	Vegetation management status
7.1.4a	O-dom	rem_oc
7.3.10a	O-dom	rem_oc
7.3.10b	O-dom	rem_oc
7.3.10c	O-dom	rem_oc
7.3.20a	O-dom	rem_oc
7.3.20b	O-dom	rem_oc
7.3.20e	O-dom	rem_oc
7.3.23a	E-dom	rem_end
7.3.25a	O-dom	rem_oc
7.3.3a	O-dom	rem_oc
7.3.3b	O-dom	rem_oc
7.3.4	O-dom	rem_oc

8b. Regulated Vegetation - Endangered/Of concern in Category C (regrowth)

Regional ecosystem	Vegetation management polygon	Vegetation management status
7.3.10a	O-dom	hvr_oc
7.3.10c	O-dom	hvr_oc
7.3.20b	O-dom	hvr_oc
7.3.20e	O-dom	hvr_oc
7.3.23a	E-dom	hvr_end
7.3.3a	O-dom	hvr_oc
7.3.4	O-dom	hvr_oc
7.3.7b	E-dom	hvr_end

8c. Regulated Vegetation - Category R (GBR riverine regrowth)

Regulated vegetation map category	Map number
R	7965

8d. Regulated Vegetation - Essential habitat

Values are present

8e. Regulated Vegetation - intersecting a watercourse**

A vegetation management watercourse is mapped as present

8f. Regulated Vegetation - within 100m of a Vegetation Management wetland

Regulated vegetation map category	Map number
B	7965
C	7965
R	7965

Refer to **Map 4 - MSES - Regulated Vegetation** for an overview of the relevant MSES.

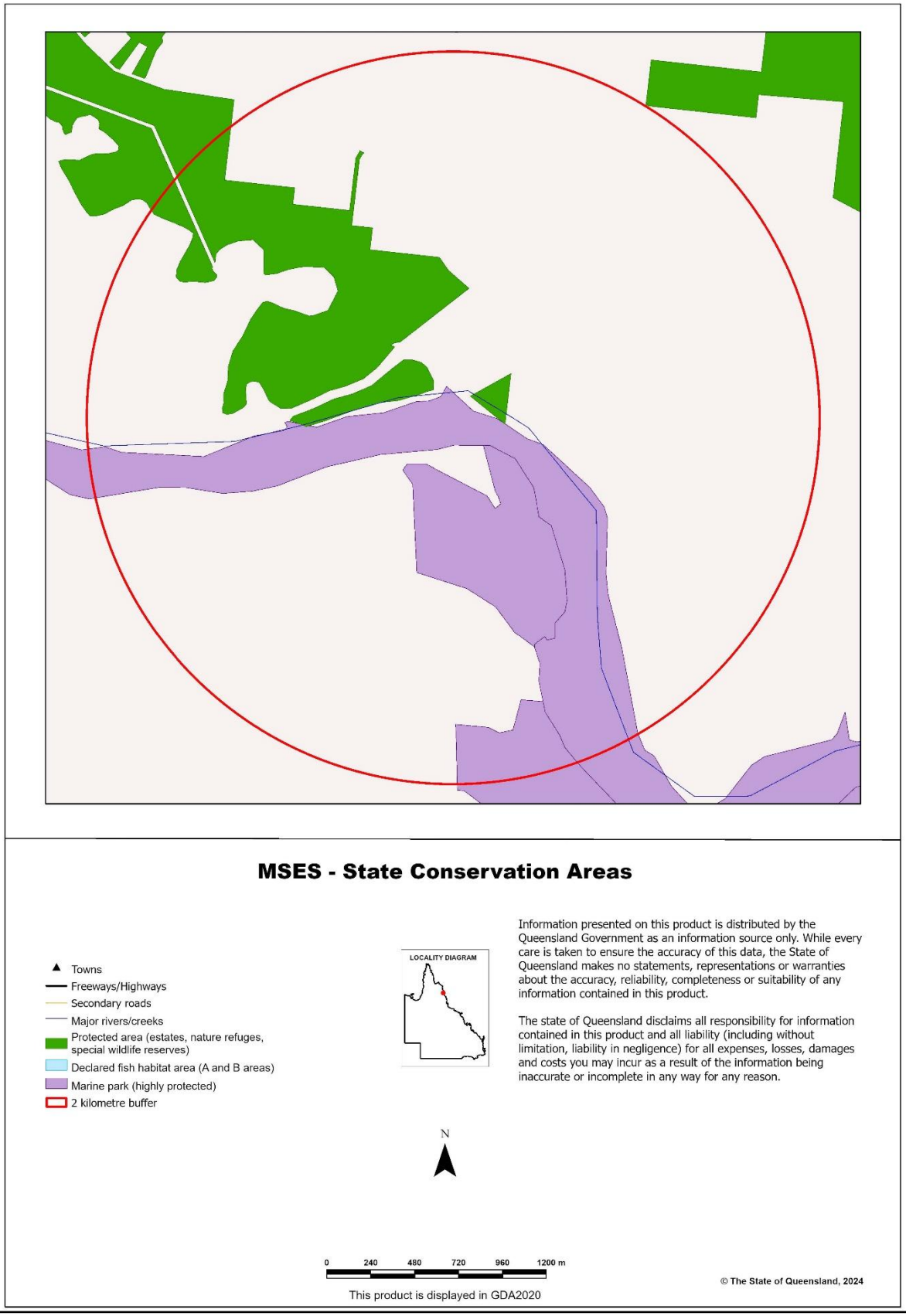
MSES - Offsets

9a. Legally secured offset areas - offset register areas
(No results)

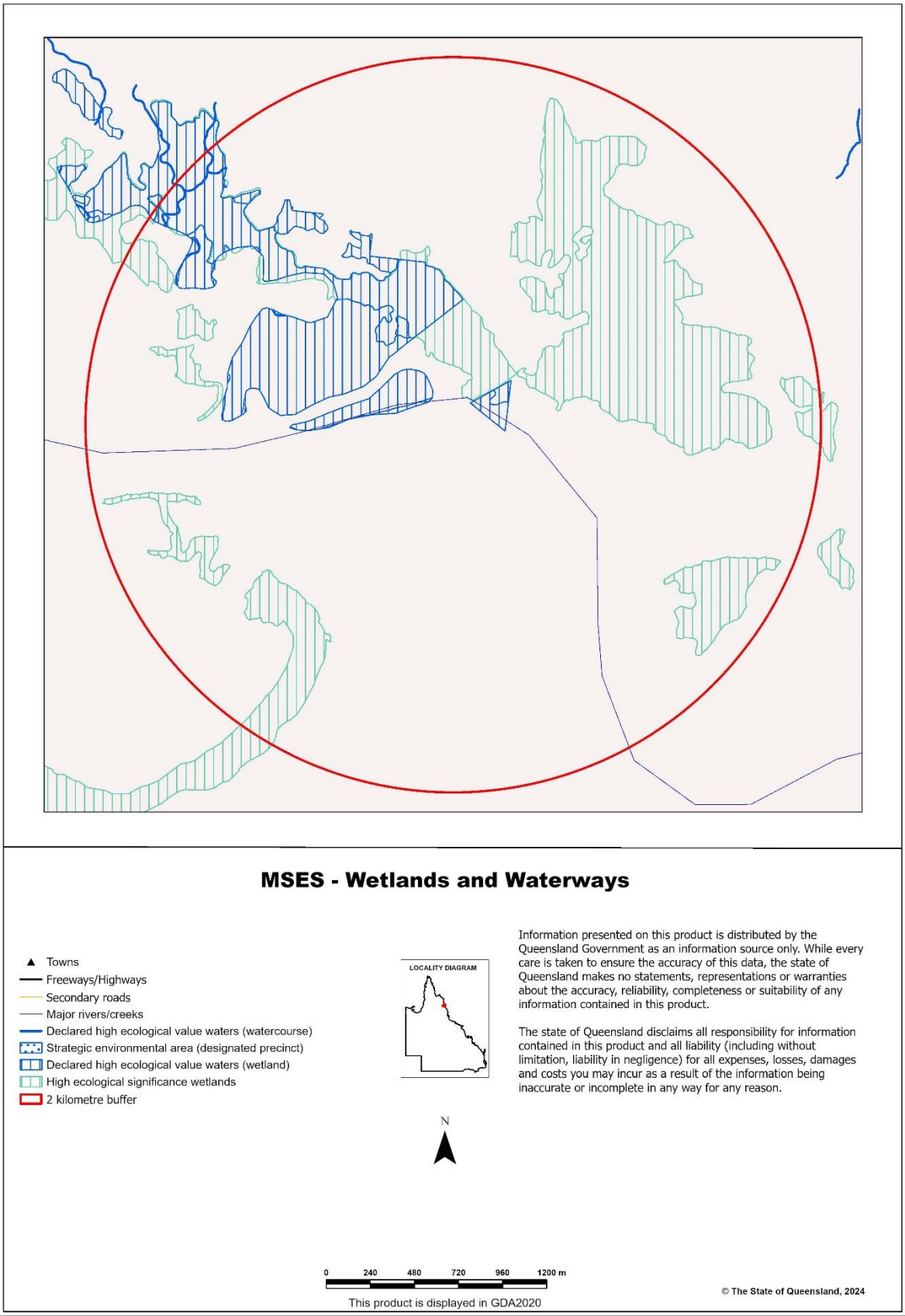
9b. Legally secured offset areas - vegetation offsets through a Property Map of Assessable Vegetation
(No results)

Refer to **Map 5 - MSES - Offset Areas** for an overview of the relevant MSES.

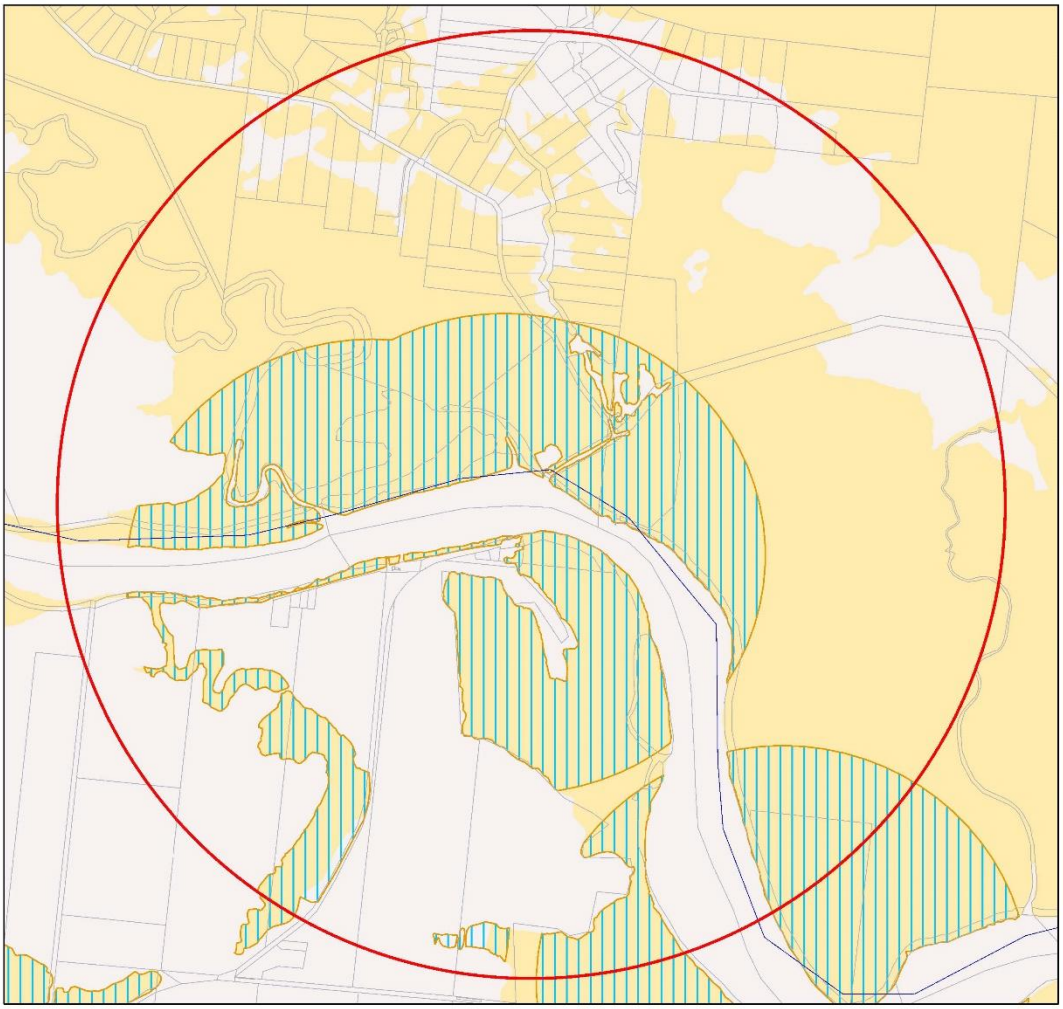
Map 1 - MSES - State Conservation Areas



Map 2 - MSES - Wetlands and Waterways



Map 3a - MSES - Species - Threatened (endangered or vulnerable) wildlife and special least concern animals



MSES - Species
Threatened (endangered or vulnerable) wildlife and special least concern animals

- ▲ Towns
- Freeways/Highways
- Secondary roads
- Major rivers/creeks
- Wildlife habitat (special least concern)
- Wildlife habitat (endangered or vulnerable)
- 2 kilometre buffer



N

0 240 480 720 960 1200 m

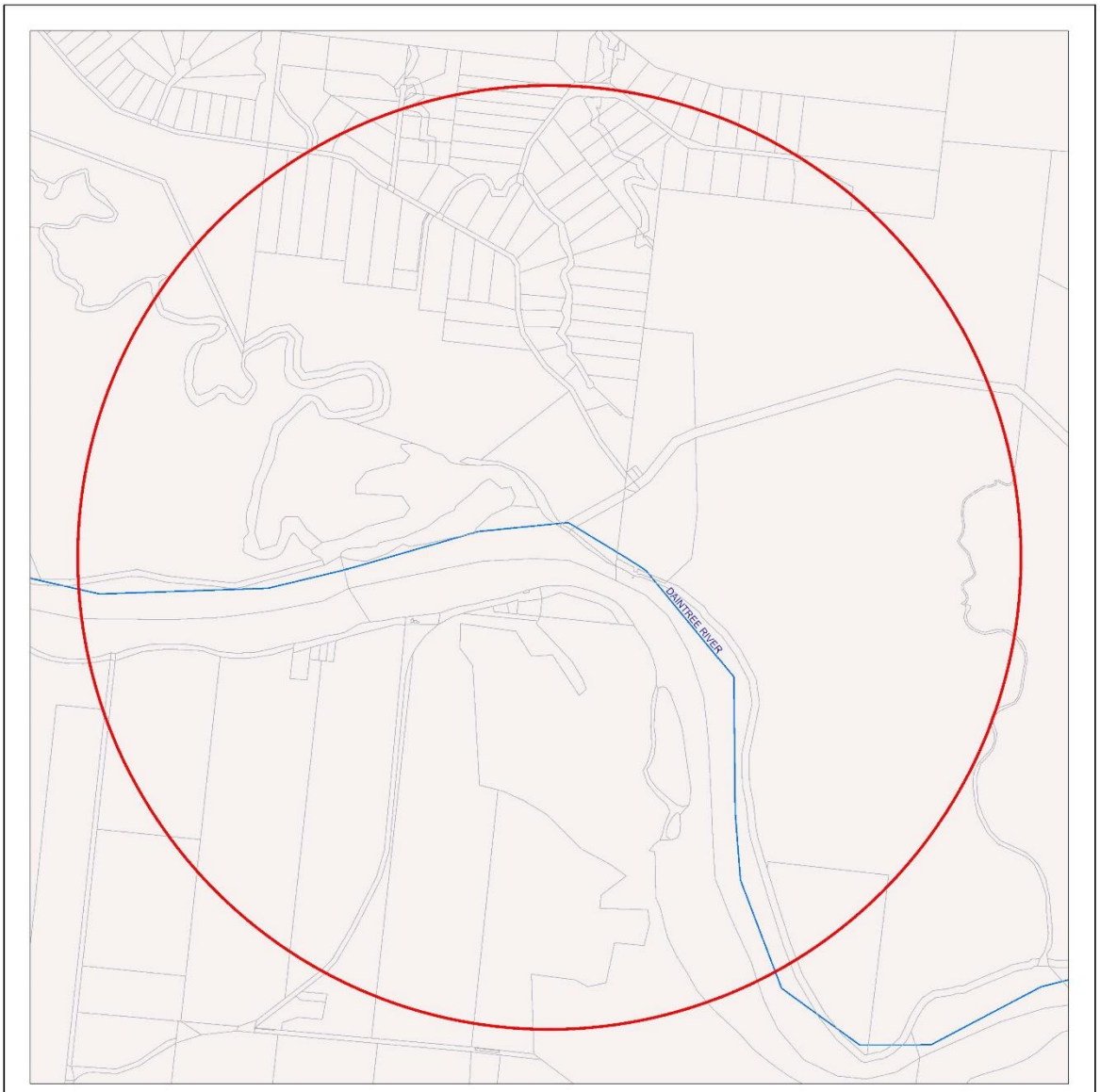
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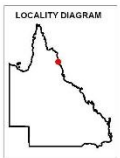
Map 3b - MSES - Species - Koala habitat area (SEQ)



MSES - Species
Koala habitat area (SEQ)

- Towns
- Freeways/Highways
- Secondary roads
- Major rivers/creeks
- Koala habitat area (core)
- Koala habitat area (locally refined)
- 2 kilometre buffer

LOCALITY DIAGRAM



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The represented layers for SEQ 'koala habitat area-core' and 'koala habitat area- locally refined' in MSES are sourced directly from the regulatory mapping under the Nature Conservation (Koala) Conservation Plan 2017. Whilst every effort is made to ensure the information remains current, there may be delays between updating versions. Please refer to the original mapping for the most recent version. See https://environment.des.qld.gov.au/wildlife/animals/living-with/koalas/mapping

The koala habitat mapping within South East Queensland uses regional ecosystem linework compiled at a scale varying from 1:25,000 to 1:100,000. Linework should be used as a guide only. The positional accuracy of regional ecosystem data mapped at a scale of 1:100,000 is +/- 100 metres.

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0 225 450 675 900 1,125 m

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Map 3c - MSES - Species - Wildlife habitat (sea turtle nesting areas)



MSES - Wildlife habitat (sea turtle nesting areas)

- Towns
- Freeways/Highways
- Secondary roads
- Major rivers/creeks
- Wildlife habitat (sea turtle nesting areas)
- 2 kilometre buffer

LOCALITY DIAGRAM



0 225 450 675 900 1,125 m

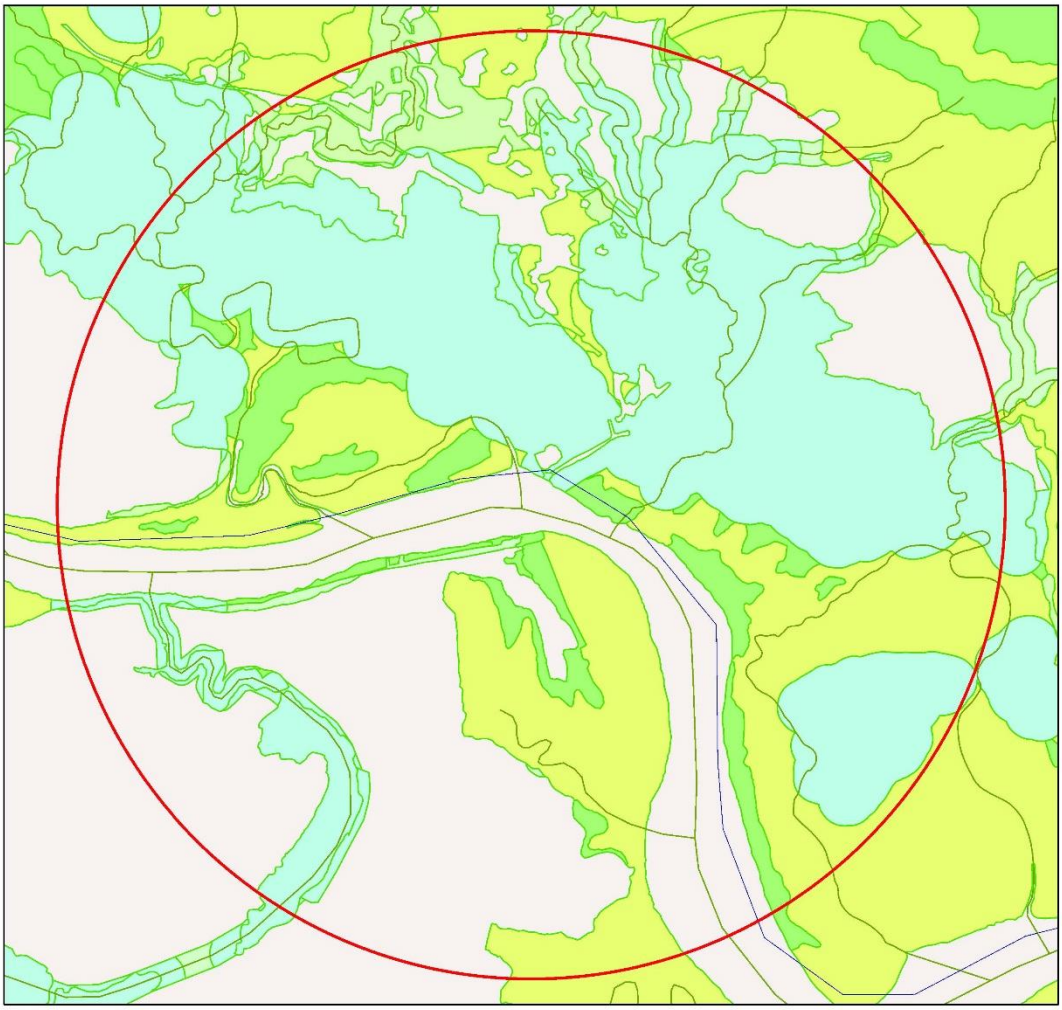
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MSES mapping of sea turtle nesting areas identifies beaches where the recorded number of turtle nests are over 1% of the turtle species or genetic stock. The linework is also deliberately extended along nearby rocky coastlines and headlands to recognise that significant numbers of nesting adults and hatchlings can become disoriented by light pollution from development on rocky coastlines and headlands while navigating offshore from nesting beaches.

Map 4 - MSES - Regulated Vegetation



MSES - Regulated Vegetation

- ▲ Towns
- Freeways/Highways
- Secondary roads
- Major rivers/creeks
- Regulated vegetation (intersecting a watercourse)
- Regulated vegetation (100m from wetland)
- Regulated vegetation (category B - endangered or of concern)
- Regulated vegetation (category C - endangered or of concern)
- Regulated vegetation (category R - GBR riverine)
- Regulated vegetation (essential habitat)
- 2 kilometre buffer



N

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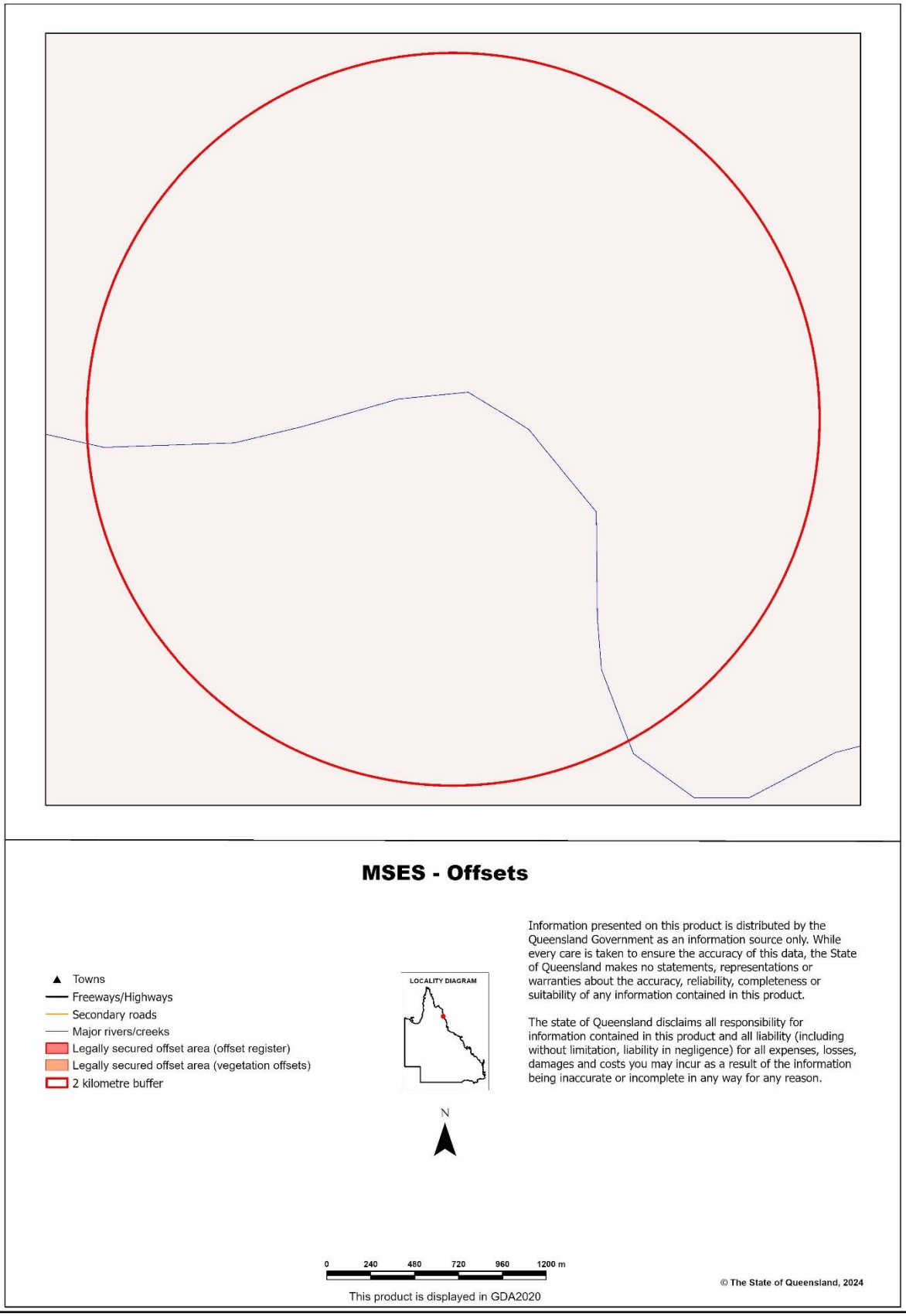
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0 240 480 720 960 1200 m

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Map 5 - MSES - Offset Areas



Appendices

Appendix 1 - Matters of State Environmental Significance (MSES) methodology

MSES mapping is a regional-scale representation of the definition for MSES under the State Planning Policy (SPP). Its primary purpose is to support implementation of the SPP biodiversity policy.

MSES mapping does not replace the regulatory mapping or environmental values specifically called up under other laws or regulations.

MSES mapping does not determine whether state or local development assessment is required. For state assessment triggers refer to the Development Assessment Mapping System (DAMS). For local assessment triggers, refer to the relevant local planning scheme.

The Queensland Government's "Method for mapping - matters of state environmental significance can be downloaded from:

http://www.ehp.qld.gov.au/land/natural-resource/method-mapping-mses.html .

Appendix 2 - Source Data

The datasets listed below are available on request from:

http://qldspatial.information.qld.gov.au/catalogue/custom/index.page

- Matters of State environmental significance

Note: MSES mapping is not based on new or unique data. The primary mapping product draws data from a number of underlying environment databases and geo-referenced information sources. MSES mapping is a versioned product that is updated generally on a twice-yearly basis to incorporate the changes to underlying data sources. Several components of MSES mapping made for the current version may differ from the current underlying data sources. To ensure accuracy, or proper representation of MSES values, it is strongly recommended that users refer to the underlying data sources and review the current definition of MSES in the State Planning Policy, before applying the MSES mapping.

Individual MSES layers can be attributed to the following source data available at QSpatial:

MSES layers	**current QSpatial data (http://qspatial.information.qld.gov.au)**
Protected Areas-Estates, Nature Refuges, Special Wildlife Reserves	- Protected areas of Queensland - Nature Refuges - Queensland - Special Wildlife Reserves- Queensland
Marine Park-Highly Protected Zones	Moreton Bay marine park zoning 2008
Fish Habitat Areas	Queensland fish habitat areas
Strategic Environmental Areas-designated	Regional Planning Interests Act - Strategic Environmental Areas
HES wetlands	Map of Queensland Wetland Environmental Values
Wetlands in HEV waters	HEV waters: - EPP Water intent for waters Source Wetlands: - Queensland Wetland Mapping (Current version 5) Source Watercourses: - Vegetation management watercourse and drainage feature map (1:100000 and 1:250000)
Wildlife habitat (threatened and special least concern)	-WildNet database species records - habitat suitability models (various) - SEQ koala habitat areas under the Koala Conservation Plan 2019
VMA regulated regional ecosystems	Vegetation management regional ecosystem and remnant map
VMA Essential Habitat	Vegetation management - essential habitat map
VMA Wetlands	Vegetation management wetlands map
Legally secured offsets	Vegetation Management Act property maps of assessable vegetation. For offset register data-contact DES
Regulated Vegetation Map	Vegetation management - regulated vegetation management map

Appendix 3 - Acronyms and Abbreviations

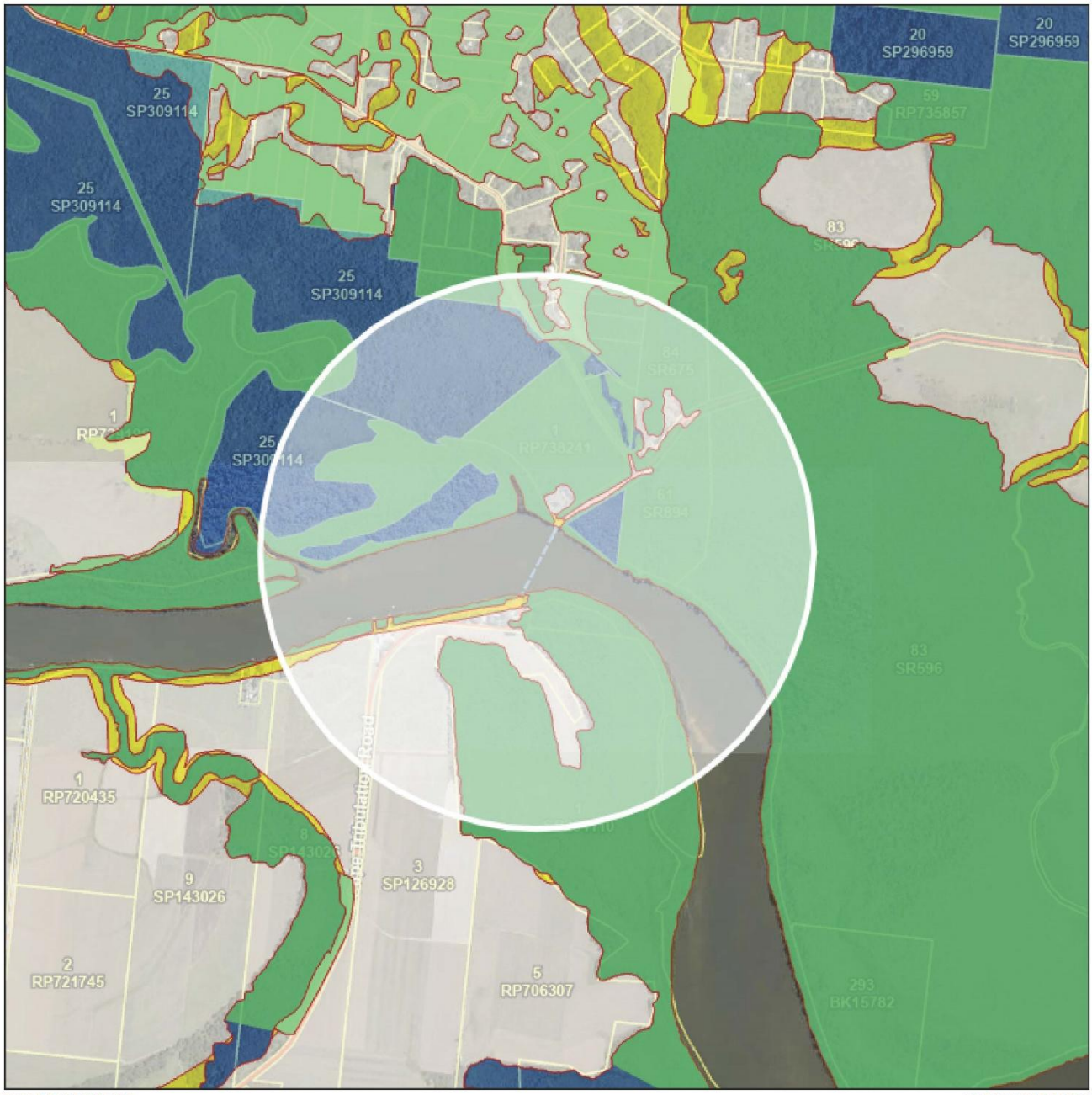
AOI	- Area of Interest
DESI	- Department of Environment, Science and Innovation
EP Act	- Environmental Protection Act 1994
EPP	- Environmental Protection Policy
GDA94	- Geocentric Datum of Australia 1994
GEM	- General Environmental Matters
GIS	- Geographic Information System
MSES	- Matters of State Environmental Significance
NCA	- Nature Conservation Act 1992
RE	- Regional Ecosystem
SPP	- State Planning Policy
VMA	- Vegetation Management Act 1999

Appendix D Regulated Vegetation Mapping

Regulated Vegetation Mapping

Daintree Ferry - PPS 2024

16°14'32"S 145°22'50"E 16°14'32"S 145°24'58"E



16°16'35"S 145°22'50"E 16°16'35"S 145°24'58"E

A product of Queensland Globe



– Category B remnant vegetation

– Category C high-value regrowth

– Category R high-value reef regrowth

– Category X

– Flora trigger area

N

0 500 metres

Scale: 1:20000

Printed at: A4

Print date: 26/6/2024

Not suitable for accurate measurement.

Projection: Web Mercator EPSG 102100 (3857)

For more information, visit https://qldglobe.information.qld.gov.au/help-info/Contact-us.html

Queensland Government
Department of Resources

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Appendix E Potential Occurrence Assessment

Common name	Scientific name	Status EPBC Act	Status NC Act	Preferred habitat	Likelihood of occurrence within project site
Threatened Fauna					
Birds					
Sharp-tailed Sandpiper	*Calidris acuminata*	V, Mi	SL	In Australia, Sharp-tailed sandpipers prefer muddy edges of shallow fresh or brackish wetlands with sedges, grass, saltmarsh, and low vegetation. They inhabit lagoons, swamps, coastal lakes, dams, waterholes, and sometimes sewage farms. They use intertidal mudflats along coastal areas and return to terrestrial wetlands during the wet season. They may be attracted to mats of algae and beach cast seaweed.	**Unlikely** The Daintree River banks where the project site is located do not contain open sand banks or mud flats to support the preferred feeding or roosting habitat for this species.
Red Knot	*Calidris canutus*	E, Mi	E	The Red Knot is a medium sized migratory shorebird with a global distribution. These birds breed in the Arctic during the austral winter and migrate to the southern hemisphere to their feeding grounds for the austral summer. In Australia, Red Knots most frequently visit the north-west, especially Roebuck Bay. Red Knots are encountered on every coastal Australian state on intertidal mudflats, sandflats, estuaries, and lagoons. They have also been observed feeding near saltworks and sewerage farms. These birds can occur in large and mixed flocks with other shorebirds.	**Unlikely** The Daintree River banks where the project site is located do not contain open sand banks or mud flats to support the preferred feeding or roosting habitat for this species.
Curlew Sandpiper	*Calidris ferruginea*	CR, Mi	E	Curlew Sandpipers mainly occur on intertidal mudflats in sheltered coastal areas, such as estuaries, bays, inlets and lagoons, and also around non-tidal swamps, lakes and lagoons near the coast, and ponds in saltworks and sewage farms. They are also recorded inland, though less often, including around ephemeral and permanent lakes, dams, waterholes and bore drains, usually with bare edges of mud or sand. They occur in both fresh and brackish waters. Occasionally they are recorded around floodwaters (Higgins 1999).	**Unlikely** The Daintree River banks where the project site is located do not contain open sand banks or mud flats to support the preferred feeding or roosting habitat for this species.
Southern Cassowary	*Casuarius casuarius johnsonii*	E	E	This large and conspicuous bird generally requires dense tropical rainforest (such as complex/non-complex notophyll/ mesophyll vine forest) and associated habitat (such as mangrove Melaleuca, eucalypt woodland, swamp and swamp forest), that provides a year-round supply of fleshy fruit (DCCEEW 2023).	**Moderate** Regulated Vegetation Management report for the region indicated essential southern cassowary habitat in the area. The southern bank of the Daintree River project alignment provides the most useful foraging habitat. The mangrove communities in the north do not contain suitable fleshy fruited species that would be utilised by the southern Cassowary.

Common name	Scientific name	Status EPBC Act	Status NC Act	Preferred habitat	Likelihood of occurrence within project site
Greater Sand Plover	*Charadrius leschenaultii*	V, Mi	V	These small – medium shorebirds breed in the northern hemisphere and migrate to Australia during the austral summer utilizing the East-Asian Australian Flyway (EAAF). There have been records of sightings along the coast of every Australian state. Greater sand plovers often occur in flocks, especially with the Lesser Sand Plover (*Charadrius mongolus*). These birds have a highly specialised diet when in Australia, requiring tidal flats, lagoons or estuaries to feed. Greater Sand Plovers roost on sand banks, lagoons, rocky points or saltmarshes. Threats to Greater Sand Plovers include habitat loss, pollution, altered bathymetry and hunting.	**Unlikely** The Daintree River banks where the project site is located do not contain open sand banks or mud flats to support the preferred feeding or roosting habitat for this species.
Lesser Sand Plover	*Charadrius mongolus*	E, Mi	E	The Lesser Sand Plover is a small to medium sized grey-brown and white plover with a dark eye-stripe. It reaches 18-21 cm in length and 56-71g in weight. This species is widespread through the coastal areas of Australia and has been recorded in all states occurring in littoral and estuarine environments. This species rarely utilises mangroves for roosting and mostly utilises beaches, sand banks, reefs and spits. This species is seldom recorded away from the coast (DCCEEW 2023).	**Unlikely** The Daintree River banks where the project site is located do not contain open sand banks or mud flats to support the preferred feeding or roosting habitat for this species.
Macleays fig-parrot	*Cyclopsitta diophthlama macleayana*		V	This species can be observed in the rainforest environments within the Cairns region, where it feeds on fruiting rainforest trees (such as figs).	**Confirmed** This species was frequently observed feeding within the canopy fig trees with RE 7.3.23a along the southern bank of the project alignment and on the northern side of the project alignment within RE 7.3.5a.
Red Goshawk	*Erythrotriorchis radiatus*	V	E	The Red Goshawk occurs in coastal and sub-coastal areas in wooded and forested lands of tropical and warm-temperate Australia (Marchant and Higgins 1993). It nests in large trees, frequently the tallest and most massive in a tall stand, and nest trees are invariably within 1 km of permanent water. Habitat must be open enough for fast attack and manoeuvring in flight but provide cover for ambushing of prey. Therefore, forests of intermediate density are favoured, or ecotones between habitats of differing densities, such as between rainforest and eucalypt forest, between gallery forest and woodland, or on edges of woodland and forest where they meet grassland, cleared land, roads or watercourses (DAWE 2021).	**Unlikely** Suitable habitat for this species is not present within the project site.
Grey Falcon	*Falco hypoleucos*	V	V	The Grey falcon is primarily found in arid and semi-arid regions of Australia, including the Murray-Darling Basin, Eyre Basin, central Australia, and Western Australia. It prefers regions with annual rainfall below 500 mm, predominantly inhabiting arid and semi-arid zones. Its distribution may marginally expand during wet years followed by drought, but it generally remains restricted to these arid and semi-arid environments. The species is notably absent from Cape York Peninsula and areas east of the Great Dividing Range in Queensland. It frequents timbered lowland plains, particularly acacia shrublands with tree-lined water courses, and has been observed hunting in treeless areas, tussock grassland, and open woodland, especially in winter. Nesting preferences include the tallest trees along watercourses, with a particular affinity for *Eucalyptus camaldulensis* and *E. coolabah*.	**Unlikely** Yearly annual rainfall within the Daintree National Park averages approximately 2000mm. Grey Falcons favour the inland arid regions of the Australian mainland.

Common name	Scientific name	Status EPBC Act	Status NC Act	Preferred habitat	Likelihood of occurrence within project site
Beach-stone curlew	*Esacus maginostris*	-	V	This species can be observed utilizing the sandy shorelines near and within estuaries, beaches and sand spits. It can also be encountered on floodplains, near permanent water bodies along the coastline and mudflats, such as those along the Cairns Esplanade.	**Unlikely** Marginal generic habitat does not occur within the project site. More suitable habitat is present closer to the mouth of the Daintree River where tidal flats form more extensive foraging habitats. The dense structure of the mangrove communities present on the project site do not provide the preferred vegetation structure for this species which prefers a more open structure.
White-bellied Storm-Petrel	*Fregetta grallaria grallaria*	V	LC	Pelagic species forming breeding colonies on offshore islands of the Pacific Ocean including on Lord Howe Island in Australia.	**Unlikely** Suitable habitat does not occur on the project site.
Latham's Snipe	*Gallinago hardwickii*	V, Mi, Ma	SL	In Australia, the Latham's Snipe is known to inhabit a wide range of permanent and ephemeral wetlands, typically favouring open freshwater wetlands with nearby shelter, often in the form of low and dense vegetation. Their habitats include flooded meadows, seasonal or semi-permanent swamps, open waters, and various other freshwater settings like bogs, billabongs, lagoons, lakes, creek or river margins, river pools, and floodplains.	**Unlikely** The Daintree River banks where the project site is located do not contain open sand banks or mud flats to support the preferred feeding or roosting habitat for this species.
White-throated Needletail	*Hirundapus caudacutus*	V	V	In Australia, the White-throated Needletail is almost exclusively aerial, from heights of less than 1 m up to more than 1000 m above the ground (Higgins 1999). Because they are aerial, it has been stated that conventional habitat descriptions are inapplicable (DAWE 2021), but there are, nevertheless, certain preferences exhibited by the species. Although they occur over most types of habitat, they are probably recorded most often above wooded areas, including open forest and rainforest, and may also fly between trees or in clearings, below the canopy, but they are less commonly recorded flying above woodland (Higgins 1999).	**Moderate** May occur as an aerial forager above the project site, although this species is highly unlikely to utilise the project site directly for roosting or breeding.
Asian Dowitcher	*Limnodromus semipalmatus*	V, Mi, Ma	SL	Asian dowitchers have a global distribution with breeding taking place in the steppe regions of Siberia, Mongolia and China. Asian dowitchers migrate south during the austral summer. In Australia, these birds are common around the northwestern shores but rarer along the northeast coast. They have also been sighted in Victoria at the Werribee treatment plant. Asian dowitchers feed on intertidal mudflats.	**Unlikely** Records of the Asian Dowitcher are few from northern Queensland. There is no suitable foraging or roosting habitat within the project site.
Bar-tailed Godwit	*Limosa lapponica baueri*	V	V	Bar-tailed Godwits inhabit estuarine mudflats, beaches and mangroves. They are common in coastal areas around Australia. They are social birds and are often seen in large flocks and in the company of other waders (Garnett et al 2010).	**Unlikely** Suitable habitat does not occur on the project site.

Common name	Scientific name	Status EPBC Act	Status NC Act	Preferred habitat	Likelihood of occurrence within project site
Eastern Curlew	*Numenius madagascariensis*	CE	E	The eastern curlew is Australia's largest shorebird and a long-haul flyer. It is easily recognisable, with its long, down-curved bill. The eastern curlew takes an annual migratory flight to Russia and north-eastern China to breed, arriving back home to Australia in August to feed on crabs and molluscs in intertidal mudflats. It is extremely shy and will take flight at the first sign of danger (Garnett et al 2010).	**Unlikely** There is limiting potential for foraging habitat to occur. More suitable habitat is present closer to the mouth of the Daintree River (~8.6 km to the east) where tidal flats form more extensive foraging habitats.
Australian Painted Snipe	*Rostratula australis*	E	V	The Australian Painted Snipe generally inhabits shallow terrestrial freshwater (occasionally brackish) wetlands. Typical sites include those with rank emergent tussocks of grass, sedges, rushes or reeds, or samphire; often with scattered clumps of lignum Muehlenbeckia or canegrass or sometimes tea-tree (Melaleuca). (Marchant & Higgins 1993).	**Unlikely** The project site contains marginal habitat for this species. There is a disturbed freshwater wetland on the northern bank of the Daintree River although this is immediately outside the proposed clearing alignment.
Australian Fairy Tern	*Sternula nereis nereis*		V	The Fairy Tern (Australian) nests on sheltered sandy beaches, spits and banks above the high tide line and below vegetation. The subspecies has been found in embayments of a variety of habitats including offshore, estuarine or lacustrine (lake) islands, wetlands and mainland coastline roosting on beaches at night (DCCEEW 2023).	**Unlikely** The project site contains marginal habitat for this species. The vegetation structure is too dense to support suitable habitat for this species.
Common Greenshank	*Tringa nebularia*	E, Mi	SL	The common Greenshank migrates to Australia as a non-breeding migrant during the boreal winters in the northern hemisphere. Away from the coast, this species inhabits several terrestrial wetlands types, such as rivers, dams, billabongs etc. Along the coast it seeks sheltered environment near mudflats, lagoons and mangroves.	**Unlikely** Lack of suitable estuarine shoreline habitat within the project site.
Buff-breasted Button-quail	*Turnix olivii*	E	E	The Buff-breasted Button-quail occurs in patches of short and sparse grassland, on a terrain of small stones (often on the lower slopes of hills and ridges), and sometimes in open glades amongst Melaleuca, Acacia, Alphitonia or Tristania, in rainforest or open Eucalyptus woodland (DAWE 2020).	**Unlikely** There is a distinct lack of suitable habitat for this species within the project site.
Masked Owl	*Tyto novaehollandiae kimberli*	V	V	In northern Australia, the Masked Owl has been recorded from riparian forest, rainforest, open forest, Melaleuca swamps and the edges of mangroves, as well as along the margins of sugar cane fields (Higgins 1999).	**Unlikely** Marginal generic foraging habitat occurs across the project site. There is limited availability of tree hollows to support nesting for this species. There is a distinct lack of records for this species within the locality.
Crustaceans					
Robert's Crayfish	*Euastacus robertsi*	E		This freshwater crayfish inhabits cool, upland rainforest habitats (streams, pools, riffles) on Mt Finnigan, Mt Pieter Bott and Thornton Peak.	**Unlikely** No suitable climatic envelope or freshwater suitable for this species occurs at the project site.

Common name	Scientific name	Status EPBC Act	Status NC Act	Preferred habitat	Likelihood of occurrence within project site
Cartilaginous Fish					
Great White Shark	*Carcharodon carcharias*	V		The Great White Shark is a long-lived shark species found within the temperate and subtropical waters of Australia. It is a widely distributed and highly mobile species and can be seen in both continental and insular shelf waters (DCCEEW, 2023).	**Unlikely** The project site is located ~8.6 km upstream from the mouth of the Daintree River comprises. This shark is not known to inhabit shallow water estuarine habitats. No nurseries are known near the project site.
Freshwater Sawfish	*Pristis pristis*	V		The Freshwater Sawfish inhabits the sandy and muddy bottoms of shallow waters in estuaries and river mouths. It is recorded in most tropical and subtropical bioregions between Cape Keraudren in Western Australia to Princess Charlotte bay in Queensland (DCCEEW, 2023).	**Moderate** The project site is located within the known range for this species. However, suitable habitat is present for this species within the project site.
Green Sawfish	*Pristis zjisron*	V		The Green Sawfish occurs from the Whitsunday Islands in Queensland, across the top end of Australia to Shark Bay in Western Australia. Green Sawfish inhabit inshore coastal environments (estuaries, muddy and sandy beaches, river mouths) and have been recorded in offshore trawl grounds (DCCEEW 2023).	**Moderate** The project site is located outside of the known range for this species. However, suitable habitat is present for this species within the project site.
Whale Shark	*Rhincodon typus*	V		The Whale Shark, the largest fish species in the world, has a global distribution inhabiting tropical and warm temperate waters (DCCEEW 2023).	**Unlikely** The project site is located ~ 8.6 km upstream from the mouth of the Daintree River. This shark is not known to inhabit shallow water estuarine habitats. No nurseries are known near the project site.
Scalloped Hammerhead	*Sphyrna lewini*	CD	WD	A coastal and semi-oceanic shark species, that has a global distribution inhabiting tropical and warm temperate waters.	**Unlikely** The project site is located ~ 8.6 km upstream from the mouth of the Daintree River. This shark is not known to inhabit shallow water estuarine habitats. No nurseries are known near the project site.
Bony Fish					
Daintree Rainbowfish	*Cairnsichthys bitaeniatus*	CE		A small fish found only in tributaries of Cooper Creek and nearby Hutchinson Creek in the Wet Tropics, near the Daintree River.	**Unlikely** The project site is located outside of the known range for this species.

Common name	Scientific name	Status EPBC Act	Status NC Act	Preferred habitat	Likelihood of occurrence within project site
Daintree Cling Goby	*Stiphonodon pelewensis*		V	In Australia, this species is found in pristine rainforest streams that have significant flow and direct access to marine habitats (DCCEEW, 2023).	**Unlikely** Suitable habitat does not occur within the project site. No proximate records for this species exist in the region.
Orange Cling Goby	*Stiphodon rutilaureus*		V	In Australia, this species is found in pristine rainforest streams that have significant flow and direct access to marine habitats (DCCEEW, 2023).	**Unlikely** Suitable habitat does not occur within the project site. No proximate records for this species exist in the region.
Opal Cling Goby	*Stiphodon semoni*	CE		In Australia, this species is found in pristine rainforest streams that have significant flow and direct access to marine habitats (DCCEEW, 2023).	**Unlikely** Suitable habitat does not occur within the project site. No proximate records for this species exist in the region.
Southern Bluefin Tuna	*Thunnus maccoyii*	CD		A pelagic, open water fish found in all of the world's oceans largely between 30 and 50 degrees south.	**Unlikely** Suitable habitat does not occur within the project site. No proximate records for this species exist in the region.
Frogs					
Tapping Nursery Frog	*Cophixalus aenigma*	E	E	A small-bodied frog 17-23 mm in length and is highly variable in coloration. The iris is heavily flecked in gold above the pupil. It is distributed in isolated populations on Thornton Peak, Carbine Tableland and Mount Finnigan. Habitat includes rainforest and boulder fields where it shelters under rocks and ground litter during the day. Eggs are laid outside of water in damp leaf litter, rotting logs etc (Anstis 2017).	**Unlikely** There is a distinct lack of suitable habitat for this species within the project site.

Common name	Scientific name	Status EPBC Act	Status NC Act	Preferred habitat	Likelihood of occurrence within project site
Elegant Frog	*Cophixalus concinnus*	CR	V	A small-bodied frog (23-26mm) with a broad head that is wider than its length. This species inhabits boulder fields and montane rainforest above 1100m of Thornton Peak. Eggs have been found under a rock attended by an adult in November. Given the cryptic nature of this species, little is known about the reproductive ecology of this species (Anstis 2017).	**Unlikely** There is a distinct lack of suitable habitat for this species within the project site.
Hosmer's Frog	*Cophixalus hosmeri*	CE		A very small frog reaching a maximum of 15mm and with a brown back and a characteristically very short first finger on unwebbed feet.	**Unlikely** The project site is located outside of the known range for this species. There is a distinct lack of suitable habitat for this species within the project site. This species is confined freshwater around the Carbine Tableland.
Australian Lace-lid	*Litoria dayi*	V	E	This frog is a rainforest species, endemic to the Wet Tropics Bioregion (Williams & Hero 1998). It is associated with rainforests and rainforest margins. In montane areas the species prefers fast-flowing rocky streams although they also frequent slower watercourses where ample vegetation exists along the margins. At low elevations, the Lace-eyed Tree Frog favours rock soaks, narrow ephemeral streams and rock outcrops in larger watercourses (DCCEEW 2022).	**Unlikely** There is a distinct lack of suitable habitat for this species within the project site.
Armoured Mistfrog	*Litoria lorica*	CR	CR	A small mottled brown tree-frog associated with fast flowing cascades and waterfalls between 600-1000 m asl. Re-discovered in 2008 on the Carbine Tablelands after being presumed extinct. Now known only from this single location although was once found on high elevation peaks from Thornton Peak to Mossman. No information on the breeding ecology of this species is known (Anstis 2017).	**Unlikely** There is a distinct lack of suitable habitat for this species within the project site.
Waterfall Frog	*Litoria nannotis*	E	E	This species is patchily distributed across the Wet Tropics of north-eastern Queensland across an altitudinal range of 100-1,300 m. It inhabits fast flowing streams and waterfalls and cascades in rainforest and adjacent sclerophyll forest (Hoskin and Hero 2008).	**Unlikely** There is a distinct lack of suitable habitat for this species within the project site.
Mountain Mistfrog	*Litoria nyakalensis*	CE	CR	This frog species has not been recorded since 1990; however, there is still insufficient data to list it as extinct. Suitable habitat is considered to be fast flowing streams in rainforest and wet sclerophyll, where they were found near riffles or cascade (Hoskin & Hero 2008).	**Unlikely** There is a distinct lack of suitable habitat for this species within the project site.
Common Mistfrog	*Litoria rheocola*		E	A wet tropics endemic torrent frog is associated with fast flowing rocky streams. It is 38 – 43 mm in length with highly variable coloration the head shape is triangular with a distinctly pointed snout. This species was once widespread from sea level to 1200 m although has declined significantly since the 1980's. This species remains relatively common below 600 m asl.	**Unlikely** There is a distinct lack of suitable habitat for this species within the project site.
Tapping Green-eyed Tree-frog	*Litoria serrata*		V	A medium sized 54- 83 mm with the outer margin of the forearms and forelegs with serrated skin along length. This species occurs between the Paluma Range to just south of Cooktown. Breeding between August and February. Females come down from the tree canopy to a stream where males are present all year around (Antsis 2017).	**Unlikely** There is a distinct lack of suitable habitat for this species within the project site.

Common name	Scientific name	Status EPBC Act	Status NC Act	Preferred habitat	Likelihood of occurrence within project site
Sharp-snouted Day Frog	*Taudactylus acutirostris*	Ex	Ex	Restricted to montane rainforest habitats and has not been recorded since 1997 (DCCEEW 2022).	**Unlikely** There is a distinct lack of suitable habitat for this species within the project site.
Northern Tinker Frog	*Taudactylus rheophilus*	CR	CR	A small stream frog 29- 33 mm in length that is known from 700-1300 m asl from Thornton Peak to Bellenden Kerr. Very little is known on the general ecology of this species although it is known to be semi-aquatic. Eggs are presumed to be laid under rocks submerged in the water (Antsis 2017).	**Unlikely** There is a distinct lack of suitable habitat for this species within the project site.
Mammals					
Blue Whale	*Balaenoptera musculus*	E	LC	This species is the largest animal ever known to have existed with the maximum confirmed length at 29.9 m and weighing up to 199 tonnes. This species has a slender body proportionate to its length. It has a pronounced splash guard in the front of their blowholes. Bluewahles are widespread in Australian waters but are known commonly to occur near the Perth Canyon and the Bonney upwelling areas of South Australia.	**Unlikely** There is a distinct lack of suitable habitat for this species within the project site.
Northern Quoll	*Dasyurus hallucatus*	E	LC	The Northern Quoll occupies a diversity of habitats across its range which includes rocky areas, eucalypt forest and woodlands, rainforests, sandy lowlands and beaches, shrubland, grasslands and desert (Threatened Species Scientific Committee 2005aq). Northern Quoll are also known to occupy non rocky lowland habitats such as beach scrub communities in central Queensland.	**Unlikely** There is a distinct lack of suitable habitat for this species within the project site.
Spotted-tailed Quoll	*Dasyurus maculatus gracilis*	E	E	The Spotted-tail quoll northern sub-species is predominately recorded in upland closed forests of the Wet Tropics Bioregion. Historical records as far south as the Paluma Range and north to Cooktown have contracted.	**Unlikely** Much of the project site does not appear to contain suitable habitat for the Spotted-tailed Quoll. This species may utilise the project site for dispersal. There is some potential for the rainforest RE 7.3. provide foraging habitat for this species however this habitat is highly fragmented. The habitat within the project site would at most represent a minor portion of a much larger foraging area.
Bennett's tree Kangaroo	*Dendrolagus bennettianus*		NT	Bennett's tree kangaroos are found in the wet tropic's region, from the Mount Amos and Mount Finnigan region tin the north, to the Daintree river and Mount Windsor region (Newell 1999). These species occupies both low and upland rainforest environments within this region. Feeds on a wide variety of rainforest tree species including multiple species within the Myrtaceae, Fabaceae, Lauraceae and Eleaocarpaceae family.	**Likely** May utilize the project site for foraging and roosting where planned works dissect RE 7.3.5a and RE 7.3.23a. This species has been recorded 400m north of the Daintree Ferry feeding on *Acacia mangium* in 2021.

Common name	Scientific name	Status EPBC Act	Status NC Act	Preferred habitat	Likelihood of occurrence within project site
Semon's Leaf-nosed Bat, Greater Wart-nosed Horseshoe-bat	*Hipposideros semoni*	V	E	The distribution for this species is poorly known having been recorded from Iron Range National Park to Cooktown (DES 2018). Foraging habitat is expected to include rainforest and savannah woodland (DES 2018).	**Moderate** May utilize the project site for foraging and roosting where suitable hollow structures are present. The project site does provide relatively poor availability of hollow bearing trees.
Ghost Bat	*Macroderma gigas*	V	E	The Ghost bat occurs in Queensland from Cape York to Rockhampton with a wide ranging of foraging habitat ranging from arid woodland in the Pilbara to tropical woodlands and rainforests (DAWE 2018). Key to the ecology of this species is the presence of suitable roosting habitat consisting of deep cave structures and rock crevices with reports of the species utilizing abandoned mining excavations (DAWE 2018).	**Unlikely** There is a distinct lack of suitable habitat for this species within the project site.
Black-footed Tree-rat	*Mesembriomys gouldii rattoides*	V	LC	The distribution of this species in Queensland is poorly known, however they are mostly recorded in eucalypt forests and woodlands around Mareeba (Burnett 2001), Cooktown, Weipa and sparsely across Cape York (Dixon and Huxley 1985). The conservation advice for the species suggests hollow availability is an important factor in their abundance (DAWE 2021).	**Unlikely** There is a distinct lack of suitable habitat for this species within the project site.
Koala	*Phascolarctos cinereus (combined populations of Qld, NW and the ACT)*	V	V	The Koala is widely distributed in eucalypt forest and woodland along the east and south coast of Australia from Kangaroo Island to Far North Queensland. Due to complex interactions between Eucalypt trees with soil composition and water availability, palatability of food trees can vary at the local scale with soil fertility and water regimes likely influencing factors (Curtis and Dennis 2012).	**Unlikely** There is a distinct lack of suitable habitat for this species within the project site.
Northern Greater Glider	*Petauroides minor*	V	V	The Greater glider occurs in a variety of eucalyptus dominated forests (Van Dyck and Strahan 2008). The species is more abundant in higher altitude forests, preferring areas with highly fertile soils (Braithwaite, Binns et al. 1988, Menkhorst 1995). Greater gliders are a hollow dependant species, which is reasonably sedentary due to their folivorous diet. Due to their requirement of hollows, they require mature forests for denning (Menkhorst 1995). Males and females have reasonably small home ranges, which overlap that are known to be between 1 and 11.5 ha (Smith, Mathieson *et al.* 2007).	**Unlikely** There is a distinct lack of suitable habitat for this species within the project site.
Spectacled Flying-fox	*Pteropus conspicillatus*	E	V	The Spectacled flying-fox occurs in the vicinity of tropical forest in the Iron Range and Wet Tropics within Australia (Churchill 2008). This species utilises resources in a diversity of landscapes- farms, eucalypt forests, melaleuca swamps, littoral and coastal forests, mangroves and urban areas (DAWE 2021). This species generally camps within or near rainforest, however are able to easily cover 50-100 km in a single night. Young are born from October to December and weaned at 5 months however cared for in creches for many more months.	**Confirmed** Suitable foraging habitat occurs across the site in the form of large *Ficus* spp. and as seasonal roosting colonies in *Melaleuca* spp. west of the northern alignment (> 100 inidividuals). This would however be a minor portion of a much larger foraging area.

Common name	Scientific name	Status EPBC Act	Status NC Act	Preferred habitat	Likelihood of occurrence within project site
Large-eared Horseshoe Bat	*Rhinolophus robertsi*	V	V	This species occurs only in northern Queensland, from the Iron Range southwards to Townsville and west to Chillagoe (Churchill 2008). The species is found in lowland rainforest, along gallery forest-lined creeks within open eucalypt forest, Melaleuca forest with rainforest understorey, open savanna woodland and tall riparian woodland of Melaleuca, *E. tereticornis* and *C. tessellaris* (Curtis et al. 2012). It mainly roosts in caves and underground mines located in rainforest, and open eucalypt forest and woodland, however roosts have also been observed in road culverts, and it is suspected that the species also uses basal hollows of large trees, dense vegetation, rockpiles and areas beneath creek banks (DEE 2018).	**Moderate** May occur on the project site as an infrequent to frequent flyover whilst foraging. Unlikely to use the works area directly.
Bare-rumped Sheath-tailed Bat	*Saccolaimus saccolaimus nudicluniatus*	V	E	Occasional individuals have been collected from a narrow coastal region (less than 40 km inland) between Ayr and Cooktown, North Queensland, with one isolated specimen from north of Coen on Cape York Peninsula (DEE 2018). The species inhabits tropical woodland and tall open forests where it roosts in long, wide hollows in the trunks of various Eucalypts, especially *E. tetradonta* and *E. platyphylla* (DEE 2018).	**Unlikely** There is a distinct lack of suitable habitat for this species within the project site.
Water Mouse	*Xeromys myoides*	V	V	Although the water mouse had been documented in three distinct locations (Northern Territory, central south Queensland, south-east Queensland) they require similar habitat including mangroves and the associated saltmarsh, sedgelands, clay pans, heathlands and freshwater wetlands. The main habitat difference at each location is the littoral, supralittoral and terrestrial vegetation which differs in structure and composition. These differences dictate the species' nesting behaviour.	**Unlikely** This species is unknown north of Cairns Airport in Queensland. Potential wetland environments may provide nesting and foraging habitat for the Water Mouse.
Reptiles					
Yakka Skink	*Egernia rugosa*	V	V	The core distribution of the Yakka Skink occurs within the Brigalow Belt Bioregion in central to southern Queensland, however this species also inhabits the Einasleigh Uplands Bioregion in north Queensland. This reptile prefers drier environments such as open woodlands and forests.	**Unlikely** There is a distinct lack of suitable habitat for this species within the project site.
Saltwater Crocodile	*Crocodylus porosus*	Mi, Ma	V	The Saltwater Crocodile is easily distinguished being the largest extant reptile and one of only two crocodile species in Australia. The general range of this species is from Broome in Western Australia across the north coast to Rockhampton in Queensland. There have been records of Saltwater Crocodiles south of Rockhampton though these are rare. As the name suggests, these crocodiles can withstand saltwater environments and are encountered in coastal brackish mangroves, billabongs, swamps, estuaries, and both salt and freshwater river systems. Saltwater Crocodiles utilise ocean currents to travel vast distances. Mating occurs from November and May with females laying eggs on nests made of vegetation adjacent to water bodies.	**Confirmed** Widespread within the Daintree River. Recorded directly adjacent to the ferry terminal during the site assessment.
Plants					
Pale Chandelier Orchid	*Acriopsis emarginata*	V	V	An epiphytic orchid that occurs within the humid lowlands of the Wet Tropics bioregion within rainforests margins and swamps (Jones et al 2021).	**Confirmed** A single individual was recorded within RE 7.1.1 on a *Brugiera* sp. trunk. This species may occur within the adjacent similar mangrove habitats.

Common name	Scientific name	Status EPBC Act	Status NC Act	Preferred habitat	Likelihood of occurrence within project site
	Acronychia acuminata		NT	A large rutaceous shrub that occurs at elevations above 300m between the Daintree River and Bloomfield River (AVH 2023).	**Unlikely** Suitable habitat does not occur within the project site. No proximate records occur.
	Actephila foetida	V	V	Endemic to NEQ, restricted to the areas around Harvey Creek and the township of Bellenden Ker, and Hutchinson Creek, Cow Bay. Altitudinal range from near sea level to 100 m. Grows as an understory plant in +/- undisturbed lowland rain forest.	**Unlikely** Suitable habitat does occur within the project site. Nearest record is recorded in lowland rainforest 4km to the north.
Jewel Orchid	*Anoectochilus yatesiae*		NT	Terrestrial herb with aboveground creeping rhizomes that are succulent and cylindrical 2-4 mm in width. 2-6 leaves per stem are dark green or coppery with silvery venation (Jones 2010). Grows on mossy rocks along small streams in shaded and humid areas. Restricted to high elevation mountain areas above 500m.	**Unlikely** The project site is outside the known elevational range for this species.
	Argophyllum cryptophlebum		V	Endemic to NEQ, occurring in the Cape Tribulation area, the Bellenden Ker - Bartle Frere massif, and on Bell Peak. Altitudinal range from 600-1500 m. Grows on granite, usually in stunted vegetation on the tops and upper slopes of mountains.	**Unlikely** Nearest record is located 11 km to the north of the project site on Thorntons Peak. Lack of granite landforms on the project site and low elevation exclude this species from potentially occurring.
	Argophyllum iridescens		V	Shrub to 2m high. Hairs found on new growth. Flowering inflorescences borne from axils and producing white flowers.	**Unlikely** Suitable habitat does occur within the project site. Nearest record is recorded in lowland rainforest 13km to the north at Noah Creek.
	Archidendron kainsii		V	Endemic to NEQ, known only from collections made in the Daintree-Cape Tribulation area. Altitudinal range from near sea level to 200 m. Grows as an understory plant in lowland rain forest.	**Unlikely** Nearest record is located 11 km to the north of the project site west of Thorntons Beach.
Hairy-joint Grass	*Arthraxon hispidus*	V	V	This species is found in and on the edges of rainforest and in wet sclerophyll forest, often near creeks or swamps. Within Australia, it has not been recorded north of Rolleston (it has also been recorded from Timor and Papua New Guinea) (DEE 2018).	**Unlikely** Suitable habitat is present within the project site, but this species has not been recorded north of Rolleston.

Common name	Scientific name	Status EPBC Act	Status NC Act	Preferred habitat	Likelihood of occurrence within project site
	Austromuellera trinervia		NT	Daintree River and the Butchers Creek-Boonjee area on the western side of Mt Bartle Frere. Altitudinal range from sea level to 800 m. Grows in well-developed lowland and upland rain forest.	**Unlikely** Suitable habitat may be present on site. This species is known to occur on a variety of soils in the locality. The nearest record is located approx. 2km to the north. This species is readily detectable when present and targeted searches did not locate this species.
	Beilschmiedia castrisinensis		NT	*Beilschmiedia castrisinensis*, is a rainforest tree/ shrub in the laurel family. It is restricted to an area between the Bloomfield and Daintree River, where it grows in well-developed upland rainforest.	**Unlikely** Nearest proximate records >5km to the east near Alexandra Creek with it grows within *Acacia celsa* forest on granite. Project site does not contain the preferred habitat for this tree.
	Bubbia queenslandica subsp. queenslandica		NT	Endemic to NEQ. Altitudinal range from 700-1250 m. Grows as an understory tree in well-developed mountain rain forest, usually on granite.	**Unlikely** Nearest record is located 11 km to the north of the project site on Thorntons Peak. Lack of granite landforms on the project site and low elevation exclude this species from potentially occurring.
	Bubbia whiteana		V	Endemic to NEQ, known only from the Thornton Peak and Mt Pieter Botte areas. Altitudinal range from 800-1500 m. Grows as an understory plant in mountain rain forest.	**Unlikely** Nearest record is located 11 km to the north of the project site on Thorntons Peak. Lack of granite landforms on the project site and low elevation exclude this species from potentially occurring.
	Buchanania mangoides		V	A small tree growing to a DBH no greater than 30cm. Endemic to NEQ, known only from collections made on Snapper, High Bedarra and North Brook Islands. Altitudinal range near sea level. Grows on calcium rich substrates in beach forest (Zich et al. 2021).	**Unlikely** Lack of suitable habitat within the project site.
	Buckinghamia ferruginiflora		V	A Proteaceae tree growing in an area between the Bloomfield and Daintree River. Grows in well-developed upland and lowland rainforest (Zich 2020a)	**Unlikely** Nearest proximate records >2km to the east near Alexandra Creek with it grows within *Acacia celsa* forest on granite. Project site does not contain the preferred habitat for this tree.

Common name	Scientific name	Status EPBC Act	Status NC Act	Preferred habitat	Likelihood of occurrence within project site
Haines's Orange Mangrove	*Bruguiera x hainesii*	CE	CE	The Haines's Orange mangrove is an evergreen mangrove tree that grows to 18m tall. One population is known in the Cairns region and occurs adjacent to the Trinity Inlet (AVH 2022).	**Unlikely** Although suitable habitat is present for this species, the project site is outside the known distribution for this species. The nearest specimen collection is 20 km south near to the town of Mossman.
	Canarium acutifolium	V	V	In Australia, *C. acutifolium var. acutifolium* grows naturally below ca. 100 m (330 ft) altitude in the scarce remaining lowland rainforests of the Wet Tropics region of north-eastern Queensland.	**Unlikely** Although suitable habitat is present for this species, the project site is outside the known distribution for this species. The nearest specimen collection is 20 km south near to the town of Mossman. No *Canarium* sp. were recorded during the site assessment.
	Carronia pedicellata	E		Rainforest vine found near sea level to 150 m asl, growing mostly in well developed lowland rainforest communities. Leaves around 6.5 – 25 cm long and densely clothed in pale hairs on the underside. Small creamy-white flowers.	**Unlikely** Suitable habitat does occur within the project site. Nearest record is recorded in lowland rainforest 13km to the north.
	Ceratopetalum corymbosum		V	Endemic to NEQ, restricted to the Thornton Peak area north of the Daintree River. Altitudinal range from 1200-1300 m. Grows in stunted mountain rain forest. This species has distinct spathulate stipules 5-10 mm in length (Zich et al 2022).	**Unlikely** Lack of suitable habitat within the project site.
	Cheilocostus potierae		E	Endemic to Queensland, occurs in CYP and NEQ with collections from some of the Torres Strait Islands and the Tully and Daintree areas. Altitudinal range very small, being found only slightly above sea level. Usually grows in disturbed areas of lowland rain forest.	**Unlikely** Suitable habitat is present within the project site. The nearest record for this species is located 5 km to the west along a tributary of the Daintree River where it occurs within complex mesophyll vine forest bordering mangroves. Targeted searches did not record this readily detectable species.
	Citrus inodora		V	Endemic to NEQ, known only from the eastern foothills of the Bellenden Ker Range - Mt Bartle Frere area and also from the Cape Tribulation area. Altitudinal range from near sea level to 120 m. Grows as an understory plant in undisturbed well developed lowland rain forest.	**Unlikely** Suitable habitat is present within the project site. The nearest record for this species is located 5 km to the south along the Daintree River. Targeted searches did not record this readily detectable species.

Common name	Scientific name	Status EPBC Act	Status NC Act	Preferred habitat	Likelihood of occurrence within project site
	Ceratopetalum macrophyllum		NT	A rainforest plant restricted to Noah Creek, Roaring Meg creek catchments and Alexandra Creek. Grows in well-developed rainforest often along creeks and gullies (Zich 2020a).	**Unlikely** Proximate records occur in sclerophyll forest within 2km to the east of the project site. Targeted searches did not record this readily detectable species.
	Chingia australis	E	E	This species is known from Wooroonooran National Park, and an area near the Daintree National Park. It is a fern found in mesophyll and upland notophyll vine forest on clay soil derived from a range of geologies. It is a specialist of small to medium sized gaps in the rainforest arising from disturbance. It is particularly dependant on the maintenance of a humid local microclimate (DAWE 2021).	**Unlikely** Suitable habitat is not present within the project site. No proximate records. Targeted searches did not record this readily detectable species.
	Crepidomanes aphlebioides		CR	A fern recorded from the Daintree region and Captain Billy Landing on Cape York. Glabrous except for small hairs near the rachis base. 4-pinnatifid, triangular-shaped fronds.	**Unlikely** Grows on creek banks usually in deep, humid gullies amongst mesic lowland vine forest. While suitable habitat is possibly present, this fern was not observed at the site, and the high salinity of the watercourse and relative exposure, may be a possible reason why.
	Cyclophyllum costatum	V	V	A large shrub that occurs within well-developed rainforest (AVH 2020).	**Unlikely** Suitable high elevation rainforest habitat does not occur within the project site. No proximate records.
	Demorchis queenslandica	V	V	Leafless terrestrial orchid with a terminal raceme up to 8 cm in length. Occurs in lowland rainforest growing in small groups on the forest floor. This orchid is rarely seen as it is only present above ground for 1-2 weeks and the elongated capsules are more readily observed than the small flowers. Flowers between November and January (Jones 2010).	**Unlikely** Targeted searches did not record this species. The site assessment was conducted at a time that was suitable for recording this species. The consultant has recorded this species along with *Acacia celsa* vine forest along tributaries of the Bloomfield River at a similar time of year to this survey.
Chocolate Tea Tree Orchid	*Dendrobium johannis*	V	V	Occurs in open humid habitats, close to swamps, in pockets of monsoon forest, and on slopes in open woodlands. (AVH 2020).	**Unlikely** Targeted searches did not record this readily detectable species. Suitable habitat may occur within the project site.

Common name	Scientific name	Status EPBC Act	Status NC Act	Preferred habitat	Likelihood of occurrence within project site
Dark-stemmed Antler Orchid	*Dendrobium mirbelianum*	E	E	An epiphytic orchid of mangroves and coastal swamps between the Daintree and Innisfail (AVH 2020).	**Unlikely** Targeted searches did not record this readily detectable species. Suitable habitat may occur within the project site. Suitable habitat may occur within the project site. No proximate records.
Blue Antler Orchid	*Dendrobium nindii*	E	E	An epiphytic orchid of mangroves and coastal swamps between the Daintree and Innisfail (AVH 2020).	**Confirmed** Twenty-three (23) individuals were recorded within RE 7.1.1/7.3.5a remnants largely on the trunks of *Heritiera littoralis*.
	Dioclea hexandra		V	Occurs in NEQ. Altitudinal range quite small, from near sea level to 50 m. Grows in lowland rain forest or swamp forest. May also occur in New Guinea.	**Unlikely** Targeted searches did not record this readily detectable species. Suitable habitat may occur within the project site. Suitable habitat may occur within the project site. Nearest record located 181 approx. 2km to the east.
	Dissiliaria tuckeri		V	A large tree that occurs on alluvia from sea level to 760m asl within well-developed rainforest. Grows along watercourses in well-developed rain forest on rocky alluvia derived from granite. (Zich et al. 2020).	**Unlikely** Targeted searches did not record this readily detectable species. Suitable habitat may occur within the project site. Suitable habitat may occur within the project site. Numerous records are located near the Daintree township aprox. 8 km to the west of the project site.
	Drosera prolifera	V	V	This small carnivorous herb is only known from the Daintree region, where it grows moist rocks and mossy ledges in rainforest environments. Altitudinal range from 400-1200m.	**Unlikely** Targeted searches did not record this readily detectable species. Suitable habitat may occur within the project site. Suitable habitat may occur within the project site. No proximate records.

Common name	Scientific name	Status EPBC Act	Status NC Act	Preferred habitat	Likelihood of occurrence within project site
	Endiandra cooperana	E	E	Endemic to NEQ, restricted to the area between Cape Tribulation and the Daintree River. Altitudinal range probably very small, from near sea level to 10 m. Grows in well developed lowland rain forest.	**Unlikely** Targeted searches did not record this readily detectable species. Suitable habitat may occur within the project site. Suitable habitat may occur within the project site. Nearest recorded located 2 km to the south east.
	Endiandra grayi		V	Endemic to NEQ, restricted to the area between the Daintree River and Cape Tribulation. Altitudinal range from sea level to 40 m. Grows in well developed lowland rain forest.	**Unlikely** Targeted searches did not record this readily detectable species. Suitable habitat may occur within the project site. Suitable habitat may occur within the project site. Located approximately 2 km to the south east.
	Endiandra micronuera		NT	Endemic to NEQ, restricted to the Daintree River and Cape Tribulation area. Altitudinal range from sea level to 250 m. Grows in well developed lowland rain forest, usually on soils derived from metamorphic rocks.	**Unlikely** Targeted searches did not record this readily detectable species. Suitable habitat may occur within the project site. Suitable habitat may occur within the project site. Located approximately 2 km to the south east.
	Freycinetia marginata		V	Occurs in CYP and NEQ. Altitudinal range from near sea level to 200 m. Grows in lowland rain forest frequently along creeks and gullies. Also occurs in New Guinea.	**Unlikely** Targeted searches did not record this readily detectable species. Suitable habitat may occur within the project site. Suitable habitat may occur within the project site. Located approximately 2 km to the south east.
	Freycinetia percocosta		V	Occurs in NT, CYP and NEQ. Altitudinal range from near sea level to 450 m. Grows in well developed lowland and upland rain forest. Also occurs in New Guinea and the Solomon Islands.	**Unlikely** Targeted searches did not record this readily detectable species. Suitable habitat may occur within the project site. Suitable habitat may occur within the project site. Nearest record located approx. 6 km to the north at Diwan.

Common name	Scientific name	Status EPBC Act	Status NC Act	Preferred habitat	Likelihood of occurrence within project site
	Gardenia actinocarpa	E	E	Endemic to NEQ, known only from the Noah Creek area. Altitudinal range quite small, close to sea level. Grows as an understory plant in undisturbed lowland rain forest.	**Unlikely** This species has a very limited distribution within the Noah Creek catchment.
	Gymnostoma australianum		V	This casuarina tree species grows within the Thornton peak region, from sea level to 1350m asl. Whilst this tree occurs within rainforest environments, it typically grows where full rainforest development is limited, such as more exposed mountain tops and along water courses (Zich 2020a).	**Unlikely** Suitable habitat is not present on the project site. Nearest record is located 10km to the north of the project site.
	Hedyotis novoguineensis		E	A small (~50cm) weakly erect herb with an altitudinal range from near sea level to 660 m. Grows in rainforest, sclerophyll forest, Allocasuarina-Meleleuca woodland, Melaleuca swamp and in grassland. Distinct from other Rubiaceae herbs that occur within the area by distinctly squared stems and relatively rounded and fleshy leaves (Zich et al. 2021).	**Unlikely** Suitable habitat is present on the project site. Nearest record is located 10km to the north of the project site. The ground layer was relatively open in most situations providing easy access to the ground layer species present. Targeted searches did not record this species.
Yellow Siris	*Heliodendron xanthoxylon*		NT	A large leguminous tree that grows in well -developed rainforest within the Wet Tropics Bioregion (AVH 2022). Known to occur in clayey soils that are poorly drained.	**Unlikely** Suitable habitat is not present on the project site. Nearest record is located 10km to the north of the project site.
	Hymenasplenium wildii	V	V	Considered endemic to NE QLD, where it is known from a small area near Daintree but also historically recorded from the Cairns region. Terrestrial on steep mudbanks or lithophytic on rocks in streambeds in lowland high rainfall humid vine forest.	**Unlikely** Suitable habitat is not present on the project site. Nearest record is located 10km to the north of the project site.
	Isachne sharpii		E	A low creeping grass. Known only from a small area near Cape Tribulation in NEQ. Altitudinal range near sea level. Grows in Licuala swamp forest and rainforest in damp soil or in shallow water.	**Unlikely** Suitable habitat and proximate records are present for this species. Targeted searches for this species did not detect any records. The ground layer was relatively open in most situations providing easy access to the ground layer species present. Nearest record is located 700m to the north east of the project site.

Common name	Scientific name	Status EPBC Act	Status NC Act	Preferred habitat	Likelihood of occurrence within project site
	Kayea larnachiana		V	Medium sized tree with large opposite leaves with a short swollen and scaley petiole. Newly emerging leaves are bright red. Endemic to NEQ, restricted to a small area between Cape Tribulation and Mossman. Altitudinal range from sea level to about 100 m. Grows in well-developed lowland rain forest.	**Unlikely** Suitable habitat and proximate records are present for this species. Targeted searches for this species did not detect any records.
	Leichhardtia araujacea	CE	CE	Endemic to the Wet Tropics Bioregion occurring between Hope Vale and Townsville. Collection localities include Endeavour River, Rockingham Bay and the Barron River. Found only in gallery rainforest systems with permanent water.	**Unlikely** There are no local records for this species within 50 km of the project site, and the habitat present is not suitable for the species.
	Lindsaea terrae-reginae		E	Endemic to the Thornton Range and Main Coast Range, NE QLD. Terrestrial or in cracks at the base of large boulders in mesic upper montane vine forest.	**Unlikely** Suitable habitat and proximate records are present for this species. Targeted searches for this species did not detect any records.
	Linospadix palmerianus		NT	Endemic to NEQ, known only from Mt Bartle Frere, the Bellenden Ker Range and the surrounding foothills. Altitudinal range from 300-1600 m. Grows as an understory plant in upland and mountain rain forests. Distinguished from other Linospadix species by the combination of the clustering habit, elongate-cylindrical fruit, regularly segmented pinnate leaf and long petiole.	**Unlikely** The project site is outside the known elevational range for this species. No records for this species occur north of the township of Mossman.
	Megahertzia amplexicaulis		NT	This rainforest tree/ shrub of the Proteaceae family occurs in the Daintree rainforest region. It is known only from Noah Creek, Mt Sorrow, Mt Hemmant, Pieter Botte Logging Area and Roaring Meg Creek (Zich 2020a).	**Unlikely** Suitable habitat and proximate records are present for this species. Targeted searches for this species did not detect any records.
Ant Plant	*Myrmecodia beccarii*	V	V	The ant plant occurs in coastal woodland and mangrove between Cooktown and Ingham in Queensland. It is a unique epiphyte (a plant that lives harmlessly on another plant) that has a special association with the golden ant which lives in the chambers of the tuber, and the Apollo jewel butterfly which lays its eggs on the plant. The golden ants carry the butterfly eggs into the chambers where they develop into butterflies.	**Confirmed** Present within mangrove forest communities on the northern banks of the Daintree River. Large numbers recorded within RE 7.1.4a and RE 7.1.1.
	Mischocarpus albescens		NT	Small tree restricted to lowland and upland well developed rainforest between the Daintree River and China Camp (AVH 2022).	**Unlikely** Suitable habitat and proximate records are present for this species. Targeted searches for this species did not detect any records.
	Mitrantia bilocularis		E	Endemic to NEQ, known only from Timber Reserve 55, Whyanbeel. Altitudinal range from 100-250 m. Grows in well-developed lowland rain forest or on the boundary between rain forest and wet sclerophyll forest.	**Unlikely** Lack of suitable habitat is present. The project site is outside the known elevational range for this species.

Common name	Scientific name	Status EPBC Act	Status NC Act	Preferred habitat	Likelihood of occurrence within project site
	Neostrearia fleckeri		NT	Endemic to NEQ, restricted to the area between the Daintree River and Innisfail. Altitudinal range from near sea level to 650 m. Grows in well developed lowland and foothill rain forest.	**Unlikely** Suitable habitat and proximate records are present for this species. Targeted searches for this species did not detect any records.
	Paramapania parvibractea		V	Tufted perennial herb to 50cm with a large inflorescence 30 cm in length (AVH 2022)	**Unlikely** Suitable habitat and proximate records are present for this species. Targeted searches for this species did not detect any records.
Forest Swamp Orchid	*Phaius pictus*	V	V	*Phaius pictus* occurs in north-east Queensland, sporadically from the McIlwraith Range, Bloomfield River to Kirrama Range. It is highly localised, restricted to rainforests from 0–600 m altitude, and usually occurs in sheltered humid sites close to streams and seepage among forest litter on boulders (Jones 2006).	**Unlikely** Suitable habitat and proximate records are present for this species. Targeted searches for this species did not detect any records.
Native Moth Orchid	*Phalaenopsis amabilis subsp. rosenstromii*	E	E	Occurs within well-developed rainforest as an epiphyte within humid sections with high air movement (Jones et al. 2020).	**Unlikely** Suitable habitat and proximate records are present for this species. Targeted searches for this species did not detect any records.
	Phaleria biflora	V	V	Large shrub or understorey tree restricted to >1000m elevation on Thorntons peak and Mt Spurgeon (Jones et al. 2020).	**Unlikely** Suitable habitat for this species does not occur within the project site.
Blue Tassel-fern	*Phlegmariurus dalhousieanus*	E	CR	*Phlegmariurus dalhousieana* grows on trees in the upper canopy of swampy forests and on rocks in rainforests. It grows in habitat along freshwater creeks (DES 2023).	**Unlikely** Suitable habitat for this species is unlikely to occur within the project site.
Rat's Tail Tassel-fern	*Phlegmariurus filiformis*	E		An epiphytic rainforest forest producing tassels of foliage. It grows off canopy trees in complex vine forest around Mt Hypipamee and on the coastal ranges between Hinchinbrook Island and Cairns, and between Mossman and Cooktown.	**Unlikely** Suitable habitat for this species is unlikely to occur within the project site.
Layered Tassel-fern	*Phlegmariurus phlegmarioides*		V	Rainforest epiphytic fern occurring at low elevations between Iron Range and Hinchinbrook Island. Can be distinguished from other Australian *Phlegmariurus* by the heterophyllous shoots and lycophylls spreading in four planes (Field et al 2022).	**Unlikely** Suitable habitat for this species is unlikely to occur within the project site.

Common name	Scientific name	Status EPBC Act	Status NC Act	Preferred habitat	Likelihood of occurrence within project site
Rock Tassel-fern	*Phlegmariurus squarrosus*	CE	CE	A lithophyte or epiphyte of rainforest occurring along watercourses between Tully and the Daintree (Field et al 2022).	**Unlikely** Suitable habitat for this species is unlikely to occur within the project site.
Square Tassel-fern	*Phlegmariurus tetrastichoides*	V	V	Occurs from the Daintree River south to Hinchinbrook Island to about 1,100 m asl.	**Unlikely** Suitable habitat for this species is unlikely to occur within the project site.
	Phyllanthus brassii		V	Occurs to Thornton Peak ad Whyanbeel north of Mossman including within the Daintree NP. Recorded at 1200-1260 m asl within montane heathland on granitic derived soils.	**Unlikely** Lack of suitable habitat for this species. The project site is outside the known elevational range for this species.
Middle Filmy Fern	*Polyphlebium endlicherianum*	E	V	A filmy fern that grows on rocks (often granite) in creeks and 'cool shady position' (AVH 2022). Recorded as a lithophyte in or near streams in upper montane rainforest (Field et al 2022).	**Unlikely** Lack of suitable habitat for this species. The project site is outside the known elevational range for this species.
	Polyscias bellendenkerensis	V	V	A small rainforest tree/shrub confined to Mount Bartle Frere, the Bellenden Ker Range, headwaters of Douglas Creek on the Daintree River and the Mount Pieter Botte area. Typically favours high altitude environments (Zich 2020a).	**Unlikely** Suitable habitat is not present within the project site. The project site is outside the known elevational range for this species.
	Randia audasii		NT	Endemic to NEQ, restricted to the area between Cooktown, Cairns and Atherton. Altitudinal range from near sea level to 600 m. Grows as an understory tree in well-developed lowland and upland rain forest	**Confirmed** Suitable habitat is present within the project site. Located approx. 6km northeast at the town of Kimberly. A single individual of this species was recorded within a landscaped garden bed on the southern bank of the Daintree River. This plant has been planted and is not considered to be 'in the wild' as per the Protected Plant Flora Guidelines.
	Ristantia gouldii	V	V	Rainforest tree growing in well-developed upland rainforest environments. Altitudinal range 450-800 metres (Zich 2020a).	**Unlikely** The project site is outside the known elevational range for this species.

Common name	Scientific name	Status EPBC Act	Status NC Act	Preferred habitat	Likelihood of occurrence within project site
	Rhodamnia sessiliflora		E	Large shrub or small tree in the Myrtaceae family. It has large opposite leaves with a distinctive three veined appearance. Whitish hairs on new terminal shoots are distinctive for this species. A widespread species in the Wet Tropics growing 0-1000 m asl on a variety of sites. A characteristic component of rainforest regrowth (Zich et al. 2022).	**Confirmed** This species was recorded (19 individuals) within RE 7.3.23a along the southern bank of the Daintree River adjacent to where the project alignment is located. It was also confirmed on the northern bank on the edge of RE 7.3.5a intersecting with RE 7.3.23a.
	Rhodomyrtus effusa		E	Endemic to NEQ. Altitudinal range from near sea level to 200 m. Grows in disturbed or previously disturbed areas of lowland rain forest.	**Confirmed** This species was recorded (10 individuals in 6 locations) within bank areas of RE 7.3.5a on the northern side of the Daintree River well away from the project alignment.
	Rhodomyrtus pervagata		E	Endemic to NEQ. Altitudinal range from 350-1250 m. Grows in well-developed upland and mountain rain forest. This species is favoured by disturbance and is a characteristic component of rain forest regrowth.	**Unlikely** The project site is well below the known elevational range for this species. The nearest record is approx. 6km to the north on a densely forested ridge line.
	Ryparosa kurrangii		NT	Endemic to NEQ, restricted to the area between the Daintree River and Cape Tribulation. Altitudinal range small, from near sea level to 100 m. Grows as an understory tree in well-developed lowland rain forest.	**Unlikely** Suitable well developed rainforest habitat is present within the project site. All records are clustered between Cape Tribulation and Diwan. The nearest record is approx. 6km to the north. Targeted searches for this species did not record any individuals.
	Sarcopteryx montana		NT	Endemic to NEQ, restricted to the higher mountains between Thornton Peak and Mt Lewis. Altitudinal range from 950-1300 m. Grows in mountain rain forest.	**Unlikely** The project site is outside the known elevation range for this species being restricted to high elevation mountain ranges. The nearest record is located approx. 11 km to the southwest of the project site on Thorntons Peak.
	Samadera baileyana		NT	An understory rainforest tree growing in the Wet Tropics region from Cape Tribulation to Innisfail (Zich 2022).	**Unlikely** Targeted searches for this species did not record any individuals.

Common name	Scientific name	Status EPBC Act	Status NC Act	Preferred habitat	Likelihood of occurrence within project site
Tully Penda	*Sphaerantia discolor*		V	Endemic to NEQ, restricted to the Russell and Johnstone River catchments west of Innisfail, Wright Creek near Edmonton and creeks in the Whyanbeel area. Altitudinal range from 150-300 m. Grows in well-developed lowland rain forest often close to creeks.	**Unlikely** The project site is outside the known elevational range for this species. The nearest record is located approx. 8km to the southwest of the project site.
	Stenocarpus cryptocarpus		NT	A rainforest Proteaceae shrub/tree growing in well-developed upland and lowland rainforest between Cooktown and Innisfail (Zich 2022).	**Unlikely** Suitable habitat is present on the site. Nearest records occur 10km to the north of the project site. Targeted searches for this species did not record any individuals.
Fern-leaved stenocarpus	*Stenocarpus davallioides*		V	A tree in the Proteaceae family growing in well-developed upland rainforest. Known only from the Alexandra Logging Area, Thornton Peak and Mt Lewis. Grows at an altitude of 650-1200m asl (Zich et al. 2020).	**Unlikely** Suitable habitat is not present on the site. No proximate records occur to the project site.
	Strongylodon lucidus		NT	Occurs in NEQ. Altitudinal range from near sea level to 100 m. Grows in well-developed lowland rain forest. Also occurs in Malesia and the Pacific islands.	**Unlikely** Nearest record is located 2 km east of the project site within RE 7.3.25. Targeted searches for this species did not record any individuals.
	Trachymene geraniifolia		NT	Occurs in the coastal mountains of NEQ. Found occasionally in rainforest also in heath vegetation. Mostly restricted to elevated heathland vegetation on mountain peaks.	**Unlikely** Suitable habitat does not occur within the project site.
	Tristellateia australasiae		NT	Occurs in CYP and NEQ. Altitudinal range from near sea level to 100 m. Grows in well-developed lowland rain forest. Also occurs in SE Asia and Malesia.	**Unlikely** Suitable habitat is present on site. Nearest records are located 10km to the north and south of the project site. Most regional records are clustered around Cape tribulation which is >20 km to the north. Targeted searches for this species did not record any individuals.
Thin Feather Orchid	*Tropilis callitrophilum*	V	V	An epiphytic orchid with narrow, linear leaves and dark plum-coloured pseudobulbs growing to 5-30 cm high. Flowers greenish-yellow turning apricot-coloured. Grows on higher mountains between Daintree and Bloomfield Rivers.	**Unlikely** Suitable high elevation rainforest habitat does not occur within the project site. No proximate records.

Common name	Scientific name	Status EPBC Act	Status NC Act	Preferred habitat	Likelihood of occurrence within project site
Dwarf Butterfly Orchid	*Vappodes lithocola*	E		A lithophytic orchid with conical pseudobulbs and green-purplish leaves, numbering up to 3-5 in groups. Grows in a localised distribution, predominantly between the Barron and Mossman Rivers.	**Unlikely** The project site is outside of the known range of this species. Targeted searches for this species did not record any individuals.
Cooktown Orchid	*Vappodes phalaenopsis*	V	V	A lithophytic orchid recorded from coastal ranges between Daintree and Cairns (DCCEEW 2022).	**Unlikely** The project site is outside of the known range of this species. Targeted searches for this species did not record any individuals
	Vrydagzynea grayi	E	E	Recorded from a single locality near the Daintree River. The single known location was cleared in the 1980's and this species has not since been recorded. Recorded from a single locality only, occurring in dense lowland rainforests, growing in well-drained loamy soil and litter on outcrops of decomposed shale. Known to flower between September and October.	**Unlikely** Much of the project site is poorly drained which would exclude the known habitat for this species. Targeted searches for this species did not record any individuals
	Wilkiea sp. (McDowall Range J. G. Tracey 14552)		NT	Endemic to NEQ. Altitudinal range from 40-700 m. Grows as an understory tree in well-developed rain forest (Zich et al. 2022).	**Unlikely** Nearest record is located 10 km north of the project site Targeted searches for this species did not record any individuals
	Whyanbeelia terra-reginae		NT	Endemic to NEQ, restricted to the area between the Daintree and Johnstone Rivers. Altitudinal range from 100-400 m. Grows in well-developed lowland and upland rain forest (Zich et al. 2022).	**Unlikely** Nearest record is located 10 km south the project site. Targeted searches for this species did not record any individuals
	Xanthophyllum fragrans		NT	Large leaf blades approximately 20 cm in length contain a pair of distinct glands and the leaf base either side of the midrib. Endemic to NEQ. Altitudinal range from near sea level to 1000 m. Grows in well-developed rain forest on a variety of sites (Zich et al. 2022).	**Unlikely** Nearest record is located 2.2 km northeast of the project site within RE 7.11.1a.
	Xanthostemon formosus	E	E	Endemic to NEQ, restricted to a few creeks between the Daintree River and Cape Tribulation. Altitudinal range quite small, from near sea level to 100 m. Grows as a rheophyte along rocky or bouldery creeks flowing through rain forest (Zich et al. 2022).	**Unlikely** Nearest record is located 2 km east of the project site within RE 7.3.25.
Velvet Jewel Orchid	*Zeuxine polygonoides*	V	V	A terrestrial orchid with leaf bearing stems 5-10cm long with 3-5 leaves measuring 3-8cm long. It grows in rainforest sites within well-developed leaf litter. It is endemic to north-eastern Queensland on the coastal ranges between Daintree and Cairns at altitudes of 450-820m.	**Unlikely** The project site is outside the known elevational range for this species. No proximate records.
Migratory and Marine Fauna					

Common name	Scientific name	Status EPBC Act	Status NC Act	Preferred habitat	Likelihood of occurrence within project site
Common Noddy	*Anous stolidus*	Mi, Ma	SL	This marine bird occurs on rocky inlets, cliff stacks and on shoals on or near islands. They have been recorded nesting in tall trees, such as Coconut palms and even in the foredune vegetation (Blakers et al. 1985) (DAWE 2020).	**Unlikely** Lack of suitable estuarine shoreline habitat within the project site
Satin Flycatcher	*Myiagra cyanoleuca*	Mi	SL	Satin Flycatchers are a migratory species. These birds travel northwards to Northern Australia and Papua New Guinea in Winter and return south in summer. This species is distributed across eastern Australia to as far south as Tasmania. Habitat for this species can vary, but they typically prefer Wet Sclerophyll forests with a dense understory and are absent in rainforests.	**Unlikely** Lack of suitable habitat and typically only seen in winter months in northern Australia.
Rufous Fantail	*Rhipidura rufifrons*	Mi	SL	Rufous fantails typically occur in wet sclerophyll and rainforest environments. Populations of this species migrate as far north as southern Papua New Guinea (DAWE 2021).	**Moderate** May occur within the deeper within the less disturbed forested parts of the project site, however, is unlikely to utilize the works area directly.
Spectacled Monarch	*Monarcha trivirgatus*	Mi	SL	The Spectacled Monarch occurs mostly in rainforest environments.	**High** Rainforest environments, including those emerging from open forest environments can provide habitat for the Spectacled Monarch.
Oriental Cuckoo	*Cuculus optatus*	Mi	E	The Oriental cuckoo is a regular migrant to Australia, where it spends the non-breeding season (Sept- May) in coastal regions across northern and eastern Australia as well as offshore islands. The species uses a range of vegetated habitats such as monsoon rainforest, wet sclerophyll forest, open woodlands and appears quite often along edges of forests, or ecotones between forest types (DAWE, 2020).	**Moderate:** Suitable habitat occurs for this species and numerous records occur in the locality.
Barn Swallow	*Hirundo rustica*	Mi	SL	The Barn swallow is a non-breeding migrant to Australia and usually occurs patchily along the north coast from the Pilbara region, Western Australia, to Fraser Island in Queensland (SEWPAC 2012). It is recorded in open country in coastal lowlands, often near water, towns, and cities. Birds are often sighted perched on overhead lines (Blakers et al. 1985) and also in or over freshwater wetlands, paperbark Melaleuca woodland, mesophyll shrub thickets and tussock grassland (Schodde & Mason 1999).	**High** May occur as an infrequent flyover or aerial foraging above the site. Unlikely to utilise the site for colonial breeding.
Osprey	*Pandion haliaetus*	Mi	SL	The Osprey forages and nests in most coastal environments Australia wide. This marine raptor can also travel inland, wherever there are large stands of water or river environments in which to hunt.	**Moderate** Any riverine or aquatic environments near the coastline provide habitat for the osprey, although this species as a higher likelihood of occurring near the immediate coastline.
Fork-tailed Swift	*Apus pacificus*	Mi, Ma	SL	The Fork-tailed swift is a non-breeding visitor to all states and territories of Australia (Higgins 1999). In north-east Queensland there are many records east of the Great Divide from near Cooktown and south to Townsville. The species is almost exclusively aerial, and mostly occur over inland plains, over dry or open habitats, including riparian woodland and tea-tree swamps, low scrub, heathland, or saltmarsh. They also occur over settled areas, including towns, urban areas, and cities (DAWE 2021).	**High** May occur as an infrequent flyover or aerial foraging above the site. Unlikely to utilise the site for colonial breeding.

Common name	Scientific name	Status EPBC Act	Status NC Act	Preferred habitat	Likelihood of occurrence within project site
Little Tern	*Sterna albifrons*	Mi	SL	Little terns have a wide but patchily distributed global population. In Australia, the northern breeding populations occurs from Broome in Western Australia along to the east coast of the Cape York Peninsular in Queensland. The habitat for this small tern comprises sheltered coastal environments such as lagoons, estuaries, sandbanks rivers mouths and on exposed beaches.	**Unlikely** Lack of suitable shoreline habitat on site.
Yellow Wagtail	*Motacilla flava*	Mi, Ma	SL	In Queensland the Yellow wagtail is a regular visitor from Mossman south to Townsville (DAWE, 2020). Habitat requirements for the Yellow Wagtail are highly variable, but typically include open grassy flats near water. Habitats include open areas with low vegetation such as grasslands, airstrips, pastures, sports fields; damp open areas such as muddy or grassy edges of wetlands, rivers, irrigated farmland, dams, waterholes; sewage farms, sometimes utilise tidal mudflats and edges of mangroves.	**Unlikely** The project site is outside of this species more typically coastal range. It is considered an uncommon migrant/vagrant to North Queensland.
Bar-tailed Godwit	*Limosa lapponica*	Mi	SL	Bar-tailed Godwits inhabit estuarine mudflats, beaches, and mangroves. They are common in coastal areas around Australia. They are social birds and are often seen in large flocks and in the company of other waders.	**Unlikely** Lack of suitable shoreline habitat within the project site.
Black-faced Monarch	*Monarcha melanopsis*	Mi	SL	Habitat of Black-faced Monarchs are generally rainforest environments	**Moderate** May occur within the well-developed rainforest sections of the project site (RE 7.3.23).
Black-winged Monarch	*Monarcha frater*	Mi	SL	Black winged Monarchs typically favour moist tropical lowland rainforests or montane forests.	**Moderate** May occur within the well-developed rainforest sections of the project site.
Great Frigatebird	*Fregata minor*	Mi	SL	The Great Frigatebird has a wide distribution in tropical seas. In the Pacific Ocean, their range extends to Hawaii and in Australia, a few pairs have been observed nesting on islands in the coral sea (Atlas of Living Australia 2020).	**Unlikely** This is a coastal species and may only be seen rarely by flying over the project site.
White-tailed Tropicbird	*Phaethon lepturus*	Mi, Ma	SL	Breeding for this species is generally restricted to the Indian Ocean at Ashmore Reef northwest of the Kimberly Coast WA (DCCEEW 2023). A pelagic feeding species that is considered a rare vagrant to the northeast coast of Australia.	**Unlikely** This is a coastal species and may only be seen rarely by flying over the project site.
Lesser Frigatebird	*Fregata ariel*	Mi	SL	The lesser Frigatebird inhabits tropical to subtropical seas in Australia. They can be found flying near the coastlines where they forage for food, sometimes near fisherman and have a well-known behaviour of harassing other sea birds of their food.	**Unlikely** Lack of suitable habitat on site.
Red-rumped Swallow	*Cecropis daurica*	Mi	SL	Occurs across a broad range of vegetation types across northern Australia (DAWE 2021).	**Unlikely** Due to being an uncommon visitor it is unlikely to occur across much of the project site. Not likely to occur in numbers large enough that a significant impact to a breeding population could occur.

Common name	Scientific name	Status EPBC Act	Status NC Act	Preferred habitat	Likelihood of occurrence within project site
Common Sandpiper	*Actitis hypoleucos*	Mi	SL	The Common Sandpiper is a migratory species to Australia and is found in coastal or inland wetland environments.	**Unlikely** Lack of suitable habitat within the project site.
Pectoral Sandpiper	*Calidris melanotos*	Mi	SL	The Pectoral Sandpiper migrates from the northern hemisphere to Australia, where it spends winter within wetlands in northeast Australia.	**Unlikely** Lack of suitable shoreline/aquatic habitat on site.
Magpie Goose	*Anseranas semipalmata*	Ma	SL	Sole living representative of the family Anseranatidae. The species inhabits wetlands such as floodplains and swamps, surviving on marine vegetation such as grass, seeds, spike-rush bulbs, and wild rice.	**Unlikely** Lack of suitable open water habitat with freshwater plants.
Cattle Egret	*Bubulcus ibis*	Ma	SL	A widely distributed species found in a variety of habitats including those highly modified by human activity, such as pasture, sewage treatment plants and parklands.	**Unlikely** Lack of suitable open habitats with appropriate vegetation (grasslands, open swamps, cattle pasture etc.)
Black-eared Cuckoo	*Chrysococcyx osculans*	Ma	SL	The Black-eared Cuckoo is found in drier country where species such as mulga and mallee form open woodlands and shrublands. It is often found in vegetation along creek beds. Migratory between Australia and Papua New Guinea – Indonesia to the north.	**Unlikely** Lack of suitable open habitats; this species avoids wetter sclerophyll and rainforest vegetation on the east coast of Australia in general and utilises drier habitats to the central-west.
Australian Snubfin Dolphin	*Orcaella heinsohni*	Mi, Ma	V	The Australian Snubfin Dolphin occurs only in the northern half of Australian waters, from the Brisbane River region to Broome, Wester Australia. Habitat for this dolphin species is almost exclusively coastal and estuarine.	**Moderate** Suitable habitat for this species is present within the project site. Disturbance to this habitat as a result of the proposal will be temporary in nature and the area subject to disturbance represent a minor portion of a much larger foraging area for this species.
Australian Humpback Dolphin	*Sousa sahulensis*	Mi, Ma	SL	This humpback dolphin is found in the tropical/subtropical waters of the Sahul Shelf from northern Australia to the southern waters off the island of New Guinea. It is considered widespread in northern Australia (Atlas of Living Australia, 2020).	**Moderate** Suitable habitat for this species is present within the project site. Disturbance to this habitat as a result of the proposal will be temporary in nature and the area subject to disturbance represent a minor portion of a much larger foraging area for this species.

Common name	Scientific name	Status EPBC Act	Status NC Act	Preferred habitat	Likelihood of occurrence within project site
Dugong	*Dugong dugon*	Mi, Ma	SL	This large marine mammal has a typical range from Shark Bay in Western Australia through to Moreton Island in South East Queensland. This species is a sea grass community specialist and as a result population of this species are related to the distribution of sea grass in tropical and sub-tropical waters off the Australian coast (DAWE, 2020).	**Unlikely** Seagrass is not considered to be present at the location of the project site within the Daintree River. Suitable foraging habitat is located closer to the mouth of the Daintree River.
Humpback Whale	*Megaptera novaeangliae*	Mi, Ma	SL	The eastern Australian humpback whales migrate near the coast of Australia on their way to and from their winter breeding areas (Cato 1991; Noad and Cato 2002; Paterson, Paterson et al. 1994). As with the western Australian population, the eastern Australian population also tend to migrate further offshore during their northward migration (Noad and Cato 2002; Paterson, Paterson et al. 1994). Three major aggregation areas have been previously identified for the eastern Australian population in Queensland around the southern end of the Great Barrier Reef, Hervey Bay and in the Gold Coast region (DAWE, 2020)	**Unlikely** The shallow coastal waters near the project site are not expected to provide habitat for this species.
Blue Whale	*Balaenoptera musculus*	Mi, Ma	SL	Blue whale habitat is variable between the two subspecies found in Australian waters. The Antarctic blue whale tends to remain at higher latitudes and migrate to lower latitudes for feeding, breeding and calving during the Australian summer, whilst some remain within the Antarctic waters year-round (Branch 2007; Sirovic, Hildebrand et al. 2009). In comparison, the pygmy blue whale habitat is more diverse, expanding throughout the Indian Ocean, with individuals moving between Australia and the warmer waters of Indonesia (DAWE, 2020).	**Unlikely** The shallow coastal waters near the project site are not expected to provide habitat for this species.
Bryde's Whale	*Balaenoptera edeni*	Mi, Ma	SL	The Bryde's Whale occurs in tropical and temperate waters and has been recorded in all Australian states except the Northern Territory. They occur in both oceanic and inshore waters (DAWE, 2020).	**Unlikely** The project site does not contain specific habitat requirements for this species. The waters off the coast here are too shallow for this whale to typically occur in.
Orca	*Orcinus orca*	Mi, Ma	SL	Globally, Orcas can be seen in any marine region. They have been recorded off all Australian states, with concentration around Tasmania (Atlas of Living Australia, 2020).	**Unlikely** Habitat on the project site is considered less than ideal for this species to occur.
Green Turtle	*Chelonia mydas*	Mi, Ma	SL	This species is commonly encountered in the offshore reefs of the Great Barrier Reef Marine Park. This turtle is also commonly seen foraging near coastlines.	**Unlikely** No known nesting locations are within the locality. Any marine habitat on site is expected to represent a very small part of a greater foraging and breeding territory for this species.
Loggerhead Turtle	*Caretta caretta*	Mi, Ma	E	Loggerhead turtles utilize a wide variety of tidal and subtidal habitats for feeding. Nesting occurs on open sandy beaches within known nesting locations in offshore on islands within the Swains reefs. Hatchlings and subadults feed on Planktonic organisms in the open ocean.	**Unlikely** No known nesting locations are within the locality. Any marine habitat on site is expected to represent a very small part of a greater foraging and breeding territory for this species.

Common name	Scientific name	Status EPBC Act	Status NC Act	Preferred habitat	Likelihood of occurrence within project site
Leatherback Turtle	*Dermochelys coriacea*	Mi, Ma	V	The Leatherback turtle has the widest distribution of any marine turtle. This species has been recorded feeding in the coastal waters of all Australian states. Whilst small nesting sites have been historically observed in central Queensland, northern New South Wales and the Northern Territory, no nesting has been recorded in Australia since 1996 (DAWE, 2020).	**Unlikely** No known nesting locations are within the locality. Any marine habitat on site is expected to represent a very small part of a greater foraging and breeding territory for this species.
Hawksbill Turtle	*Eretmochelys imbricata*	Mi, Ma	E	Hawksbill turtles forage in tropical tidal and subtidal coral and rocky reef environments, where they feed on marine sponges and algae. The distribution in Australia extends from mid- western Western Australia through to southern Queensland. They have also been seen in the waters off northern New South Wales (Boyle, FitzSimmons et al. 2017).	**Unlikely** No known nesting locations are within the locality. The project site is located ~ 8.6 km upstream from the mouth of the Daintree River. The project site is not considered suitable habitat for this species.
Olive Ridley Turtle	*Lepidochelys olivacea*	Mi, Ma		Olive-Ridley Turtles have been known to forage in shallow benthic habitat from northern Western Australia to south Queensland. No concentrated nesting of this species has been recorded in Australia, however low-density nesting has been recorded off the Northern territory and Cape York Peninsular (Boyle, FitzSimmons et al. 2017).	**Unlikely** No known nesting locations are within the locality. The project site is located ~ 8.6 km upstream from the mouth of the Daintree River. The project site is not considered suitable habitat for this species.
Flatback Turtle	*Natator depressus*	Mi, Ma		The Flatback Turtle is only found in the tropical waters off northern Australia, Papua New Guinea and the Iranian Jaya. In Queensland, the nesting spots are distributed across the east coast between Bundaberg and the Torres Strait. The main nesting areas are located in the southern Great Barrier Reef (Boyle, FitzSimmons et al. 2017).	**Unlikely** No known nesting locations are within the locality. The project site is located ~ 8.6 km upstream from the mouth of the Daintree River. The project site is not considered suitable habitat for this species.
Green Sawfish	*Pristis zijsron*	Mi, Ma		The Green Sawfish occurs from the Whitsunday Islands in Queensland, across the top end of Australia to Shark Bay in Western Australia. Green Sawfish inhabit inshore coastal environments (estuaries, muddy and sandy beaches, river mouths) and have been recorded in offshore trawl grounds (DAWE, 2020).	**Unlikely** The project site is located ~ 8.6 km upstream from the mouth of the Daintree River. The project site is not considered suitable habitat for this species.
Freshwater Sawfish	*Pristis pristis*	Mi, Ma		The Freshwater Sawfish inhabits the sandy and muddy bottoms of shallow waters in estuaries and river mouths. It is recorded in most tropical and subtropical bioregions between Cape Keraudren in Western Australia to Princess Charlotte Bay in Queensland (DAWE, 2020).	**Unlikely** The project site is located ~ 8.6 km upstream from the mouth of the Daintree River. The project site is not considered suitable habitat for this species.
Great White Shark	*Carcharodon carcharias*	Mi, Ma		The Great White Shark is a long-lived shark species found within the temperate and subtropical waters of Australia. It is a widely distributed and highly mobile species and can be seen in both continental and insular shelf waters (DAWE, 2020).	**Unlikely** The project site is located ~ 8.6 km upstream from the mouth of the Daintree River. The project site is not considered suitable habitat for this species.
Oceanic Whitetip shark	*Carcharhinus longimanus*	Ma, Mi		Found around the northern, western and eastern coasts of Australia, this shark species is a large, pelagic fish. It utilises deep, open ocean waters for hunting and breeding. Usually, it is found in saltwater at depths over 37 m (Compagno, 1984)	**Unlikely** The project site is located ~ 8.6 km upstream from the mouth of the Daintree River. The project site is not considered suitable habitat for this species.

Common name	Scientific name	Status EPBC Act	Status NC Act	Preferred habitat	Likelihood of occurrence within project site
Giant Manta Ray	*Mobula birostris*	Mi, Ma		The reef Manta Ray has a large distribution over tropical and subtropical waters of the Indo-Pacific Ocean (Atlas of Living Australia, 2020).	**Unlikely** The project site is located ~ 8.6 km upstream from the mouth of the Daintree River. The project site is not considered suitable habitat for this species.
Whale Shark	*Rhincodon typus*	Mi, Ma		The Whale Shark, the largest fish species in the world, has a global distribution inhabiting tropical and warm temperate waters (DAWE, 2020).	**Unlikely** The project site is located ~ 8.6 km upstream from the mouth of the Daintree River. The project site is not considered suitable habitat for this species.
Narrow Sawfish	*Anoxypristis cuspidata*	Mi, Ma		This sawfish species can be found in inshore water habitats, such as bays and estuaries but also in the ocean at depths to 40 metres (Atlas of Living Australia, 2020)	**Unlikely** The project site is located ~ 8.6 km upstream from the mouth of the Daintree River. The project site is not considered suitable habitat for this species.
Reef Manta Ray	*Mobula alfredi*	Mi, Ma		The reef Manta Ray has a large distribution over tropical and subtropical waters of the Indo-Pacific Ocean (Atlas of Living Australia, 2020).	**Unlikely** This species utilises pelagic waters and the habitat on the project site is not suitable habitat.

Appendix F EPBC Act 1999 Significant Impact Assessment (SIA)

	Will the proposed works...								
Threatened Species	**Lead to a long-term decrease in the size of an important population?**	**Reduce the area of occupancy of an important population?**	**Fragment an existing important population into two or more populations?**	**Adversely affect habitat critical to the survival of a species**	**Disrupt the breeding cycle of an important population**	**Modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to be in decline?**	**Result in invasive species that are harmful to a vulnerable species being established in the vulnerable species habitat?**	**Introduce disease that may cause the species to decline?**	**Interfere substantially with the recovery of the species?**
Fauna									
Spectacled Flying-fox (**Endangered**) **Confirmed to be present within the project site**	The project site clearing alignment occurs within generic potential Spectacled Flying-fox habitat. Suitable foraging habitat is determined to be present within the clearing alignment. Roosting habitat is located within the project site. The removal of 0.3 ha of suitable foraging habitat is proposed directly adjacent to existing transport infrastructure. A seasonal roosting colony was recorded of up to 100 individuals (July 2024). This is a temporary seasonal roost that is used during the winter Melaleuca flowering period. Clearing approximately 100m to the east of this area when the colony is not present will not impact the use of this site. Connectivity to extensive areas of suitable vegetation will be maintained as a result of the proposal. It is not considered that the proposal will lead to a long-term decrease of an important population.	A seasonal roosting colonies was recorded of up to 100 individuals (July 2024). This is a temporary seasonal roost that is used during the winter Melaleuca flowering period. Clearing approximately 100m to the east of this area when the colony is not present will not impact the use of this site. A minor area of foraging habitat is present and at most would represent a minor portion of a much larger foraging area. The proposal is not considered likely to reduce the area of occupancy of an important population.	Unlikely. This species is highly mobile in fragmented landscapes and the removal of this habitat will not restrict dispersal across the landscape.	The project site contains generic foraging habitat. There is a distinct lack of colonial roosting habitat within the project site. The proposed clearing alignment is not considered likely to adversely affect habitat critical to the survival of the Spectacled Flying Fox.	No known roosting colonies are present within the project site. A minor area of foraging habitat is present and at most would represent a minor portion of a much larger foraging area. The proposal is not considered likely to disrupt the breeding cycle of an important population.	Based on the extent of habitat proposed to be cleared and the lack of roosting habitat present in proximity to the project site, it is not considered likely that the proposal will modify destroy, isolate or decrease the availability or quality of habitat to the extent that the Spectacled Flying Fox is likely to be in decline.	Proposed works will not likely result in the introduction of invasive species to potential habitat. The clearing of this vegetation will not further impact on the adjacent vegetation. A VMP will be designed to manage retained vegetation during and post construction.	There are no infectious diseases of Spectacled Flying-fox that are currently known to result in high levels of mortality that could be inflicted during these works. It is thus unlikely that the proposed works will facilitate the spread of any diseases to the detriment of this species.	Based on the extent of habitat proposed to be cleared and the lack of roosting habitat present in proximity to the project site, it is not considered likely that the proposal will substantially interfere with the recovery of the species.

	Will the proposed works...								
Threatened Species	**Lead to a long-term decrease in the size of an important population?**	**Reduce the area of occupancy of an important population?**	**Fragment an existing important population into two or more populations?**	**Adversely affect habitat critical to the survival of a species**	**Disrupt the breeding cycle of an important population**	**Modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to be in decline?**	**Result in invasive species that are harmful to a vulnerable species being established in the vulnerable species habitat?**	**Introduce disease that may cause the species to decline?**	**Interfere substantially with the recovery of the species?**
Pale Chandelier Orchid (**Vulnerable**) **Confirmed to be present within the project site**	The project site clearing alignment occurs within confirmed Pale Chandelier Orchid habitat. A protected plant survey was undertaken within 100m of the proposed clearing alignment and a single individual was recorded within RE 7.1.1. No individuals were recorded within the direct clearing alignment. Given that no individuals will be cleared as a result of the proposal. It is not considered that the proposal will lead to a long-term decrease of an important population.	No individuals were recorded within the direct clearing alignment. An impact management plan (IMP) will be produced to inform management of the habitat. Given this, the proposal is not considered likely to reduce the area of occupancy of an important population.	No individuals will be cleared as a result of the proposal. All clearing will be on existing clearing edges.	The vegetation proposed to be cleared does not contain any Pale Chandelier Orchids. The proposed clearing alignment is not considered likely to adversely affect habitat critical to the survival of the Pale Chandelier Orchid.	The vegetation proposed to be cleared does not contain any Pale Chandelier Orchids. The proposed clearing alignment is not considered likely to adversely affect habitat critical to the survival of the Pale Chandelier Orchid.	Based on the extent of habitat proposed to be cleared and the lack of roosting habitat present in proximity to the project site, it is not considered likely that the proposal will modify destroy, isolate or decrease the availability or quality of habitat to the extent that this species is likely to be in decline.	Proposed works will not likely result in the introduction of invasive species to potential habitat. The clearing of this vegetation will not further impact on the adjacent vegetation. An impact management plan will be designed to manage retained vegetation during and post construction.	There are no infectious diseases of the Pale Chandelier Orchid that are currently known to result in high levels of mortality that could be inflicted during these works. It is thus unlikely that the proposed works will facilitate the spread of any diseases to the detriment of this species.	Based on the extent of habitat proposed to be cleared and the lack of orchid individuals present within the direct clearing alignment, it is not considered likely that the proposal will substantially interfere with the recovery of the species.
Blue Antler Orchid (**Endangered**) **Confirmed to be present within the project site**	The project site clearing alignment occurs within confirmed Pale Chandelier Orchid habitat. A protected plant survey was undertaken within 100m of the proposed clearing alignment and 23 individual plants were recorded within RE 7.1.1. No individuals were recorded within the direct clearing alignment. Given that no individuals will be cleared as a result of the proposal. It is not considered that the proposal will lead to a long-term decrease of an important population.	No individuals were recorded within the direct clearing alignment. An impact management plan (IMP) will be produced to inform management of the habitat. Given this, the proposal is not considered likely to reduce the area of occupancy of an important population.	No individuals will be cleared as a result of the proposal. All clearing will be on existing clearing edges.	The vegetation proposed to be cleared does not contain any Blue Antler Orchids. The proposed clearing alignment is not considered likely to adversely affect habitat critical to the survival of the species.	The vegetation proposed to be cleared does not contain any Blue Antler Orchids. The proposed clearing alignment is not considered likely to adversely affect habitat critical to the survival of the species.	Based on the extent of habitat proposed to be cleared and the lack of roosting habitat present in proximity to the project site, it is not considered likely that the proposal will modify destroy, isolate or decrease the availability or quality of habitat to the extent that this species is likely to be in decline.	Proposed works will not likely result in the introduction of invasive species to potential habitat. The clearing of this vegetation will not further impact on the adjacent vegetation. An impact management plan will be designed to manage retained vegetation during and post construction.	There are no infectious diseases of the Blue Antler Orchid that are currently known to result in high levels of mortality that could be inflicted during these works. It is thus unlikely that the proposed works will facilitate the spread of any diseases to the detriment of this species.	Based on the extent of habitat proposed to be cleared and the lack of orchid individuals present within the direct clearing alignment, it is not considered likely that the proposal will substantially interfere with the recovery of the species.

	Will the proposed works...								
Threatened Species	**Lead to a long-term decrease in the size of an important population?**	**Reduce the area of occupancy of an important population?**	**Fragment an existing important population into two or more populations?**	**Adversely affect habitat critical to the survival of a species**	**Disrupt the breeding cycle of an important population**	**Modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to be in decline?**	**Result in invasive species that are harmful to a vulnerable species being established in the vulnerable species habitat?**	**Introduce disease that may cause the species to decline?**	**Interfere substantially with the recovery of the species?**
Ant Plant (**Vulnerable**) **Confirmed to be present within the project site**	The project site clearing alignment occurs within confirmed Ant Plant habitat. A protected plant survey was undertaken within 100m of the proposed clearing alignment and 567 individuals were recorded within RE 7.1.1, RE 7.1.4 and RE 7.1.5. No individuals were recorded within the direct clearing alignment. Given that no individuals will be cleared as a result of the proposal. It is not considered that the proposal will lead to a long-term decrease of an important population.	No individuals were recorded within the direct clearing alignment. An impact management plan (IMP) will be produced to inform management of the habitat. Given this, the proposal is not considered likely to reduce the area of occupancy of an important population.	No individuals will be cleared as a result of the proposal. All clearing will be on existing clearing edges.	The vegetation proposed to be cleared does not contain any Ant Plants. The proposed clearing alignment is not considered likely to adversely affect habitat critical to the survival of the Ant Plant.	The vegetation proposed to be cleared does not contain any Ant Plants. The proposed clearing alignment is not considered likely to adversely affect habitat critical to the survival of the Ant Plant.	Based on the extent of habitat proposed to be cleared and the lack of roosting habitat present in proximity to the project site, it is not considered likely that the proposal will modify destroy, isolate or decrease the availability or quality of habitat to the extent that this species is likely to be in decline.	Proposed works will not likely result in the introduction of invasive species to potential habitat. The clearing of this vegetation will not further impact on the adjacent vegetation. An impact management plan will be designed to manage retained vegetation during and post construction.	There are no infectious diseases of the Ant Plant that are currently known to result in high levels of mortality that could be inflicted during these works. It is thus unlikely that the proposed works will facilitate the spread of any diseases to the detriment of this species.	Based on the extent of habitat proposed to be cleared and the lack of Ant Plant individuals present within the direct clearing alignment, it is not considered likely that the proposal will substantially interfere with the recovery of the species.
Rhodamnia sessiliflora **(Endangered) Confirmed to be present within the project site**	The project site clearing alignment occurs within confirmed habitat for this myrtaceous species. A protected plant survey was undertaken within 100m of the proposed clearing alignment and 19 individuals were recorded within REs 7.3.5a and 7.3.23a. No individuals were recorded within the direct clearing alignment. Given that no individuals will be cleared as a result of the proposal. It is not considered that the proposal will lead to a long-term decrease of an important population.		No individuals will be cleared as a result of the proposal. All clearing will be on existing clearing edges.	The vegetation proposed to be cleared does not contain any individuals of this species. The proposed clearing alignment is not considered likely to adversely affect habitat critical to the survival of the species.	The vegetation proposed to be cleared does not contain any *R. sessiliflora*. The proposed clearing alignment is not considered likely to adversely affect habitat critical to the survival of the species.	Based on the extent of habitat proposed to be cleared and the lack of roosting habitat present in proximity to the project site, it is not considered likely that the proposal will modify destroy, isolate or decrease the availability or quality of habitat to the extent that this species is likely to be in decline.	Proposed works will not likely result in the introduction of invasive species to potential habitat. The clearing of this vegetation will not further impact on the adjacent vegetation. An impact management plan will be designed to manage retained vegetation during and post construction.	Myrtle-rust (*Austropuccinia psidii*) is a highly-infectious and often fatal disease affecting myrtaceous plant species in Australia. It is important that actions are taken to minimise its spread or introduction within the area during preparation, construction and maintenance works associated with the project. An impact management plan (IMP) will be produced to inform management of this impact.	Based on the extent of habitat proposed to be cleared and the lack of *R. sessiliflora* individuals present within the direct clearing alignment, it is not considered likely that the proposal will substantially interfere with the recovery of the species.

	Will the proposed works...								
Threatened Species	**Lead to a long-term decrease in the size of an important population?**	**Reduce the area of occupancy of an important population?**	**Fragment an existing important population into two or more populations?**	**Adversely affect habitat critical to the survival of a species**	**Disrupt the breeding cycle of an important population**	**Modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to be in decline?**	**Result in invasive species that are harmful to a vulnerable species being established in the vulnerable species habitat?**	**Introduce disease that may cause the species to decline?**	**Interfere substantially with the recovery of the species?**
Rhodomyrtus effusa **(Endangered) Confirmed to be present within the project site**	The project site clearing alignment occurs within confirmed habitat for this myrtaceous species. A protected plant survey was undertaken within 100m of the proposed clearing alignment and 19 individuals were recorded within REs 7.3.5a and 7.3.23a. No individuals were recorded within the direct clearing alignment. Given that no individuals will be cleared as a result of the proposal. It is not considered that the proposal will lead to a long-term decrease of an important population.			The vegetation proposed to be cleared does not contain any individuals of this species. The proposed clearing alignment is not considered likely to adversely affect habitat critical to the survival of the species.	The vegetation proposed to be cleared does not contain any *R. effusa*. The proposed clearing alignment is not considered likely to adversely affect habitat critical to the survival of the species.	Based on the extent of habitat proposed to be cleared and the lack of roosting habitat present in proximity to the project site, it is not considered likely that the proposal will modify destroy, isolate or decrease the availability or quality of habitat to the extent that this species is likely to be in decline.	Proposed works will not likely result in the introduction of invasive species to potential habitat. The clearing of this vegetation will not further impact on the adjacent vegetation. An impact management plan will be designed to manage retained vegetation during and post construction.	• Myrtle-rust (*Austropuccinia psidii*) is a highly-infectious and often fatal disease affecting myrtaceous plant species in Australia. It is important that actions are taken to minimise its spread or introduction within the area during preparation, construction and maintenance works associated with the project. An impact management plan (IMP) will be produced to inform management of this impact.	Based on the extent of habitat proposed to be cleared and the lack of *R. effusa* individuals present within the direct clearing alignment, it is not considered likely that the proposal will substantially interfere with the recovery of the species.

	Will the proposed works...								
Threatened Species	**Lead to a long-term decrease in the size of an important population?**	**Reduce the area of occupancy of an important population?**	**Fragment an existing important population into two or more populations?**	**Adversely affect habitat critical to the survival of a species**	**Disrupt the breeding cycle of an important population**	**Modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to be in decline?**	**Result in invasive species that are harmful to a vulnerable species being established in the vulnerable species habitat?**	**Introduce disease that may cause the species to decline?**	**Interfere substantially with the recovery of the species?**
Southern Cassowary (**Endangered**) **Moderate potential to occur within the project site**	The project site clearing alignment occurs within generic potential Southern Cassowary habitat. Suitable foraging habitat is determined to be present within the clearing alignment. The removal of 0.3 ha of suitable foraging habitat is proposed directly adjacent to existing transport infrastructure. Connectivity to extensive areas of suitable vegetation will be maintained as a result of the proposal. It is not considered that the proposal will lead to a long-term decrease of an important population.	No breeding habitat present within the project site or direct clearing alignment given the proximity to human modified landscapes including roads. A minor area of foraging habitat is present and at most would represent a minor portion of a much larger foraging area. The proposal is not considered likely to reduce the area of occupancy of an important population.	Unlikely. This species is highly mobile in fragmented landscapes and the removal of this habitat will not restrict dispersal across the landscape.	The proposed clearing alignment is not considered likely to adversely affect habitat critical to the survival of the Southern Cassowary.	No known breeding habitat is present within the project site. A minor area of foraging habitat is present and at most would represent a minor portion of a much larger foraging area. The proposal is not considered likely to disrupt the breeding cycle of an important population.	Based on the extent of habitat proposed to be cleared and the lack of breeding habitat present in proximity to the project site, it is not considered likely that the proposal will modify destroy, isolate or decrease the availability or quality of habitat to the extent that the Southern Cassowary is likely to be in decline.	Proposed works will not likely result in the introduction of invasive species to potential habitat. The clearing of this vegetation will not further impact on the adjacent vegetation. A VMP will be designed to manage retained vegetation during and post construction.	There are no infectious diseases of Southern Cassowary that are currently known to result in high levels of mortality that could be inflicted during these works. It is thus unlikely that the proposed works will facilitate the spread of any diseases to the detriment of this species.	Based on the extent of habitat proposed to be cleared and the lack of roosting habitat present in proximity to the project site, it is not considered likely that the proposal will substantially interfere with the recovery of the species.

	Will the proposed works...								
Threatened Species	**Lead to a long-term decrease in the size of an important population?**	**Reduce the area of occupancy of an important population?**	**Fragment an existing important population into two or more populations?**	**Adversely affect habitat critical to the survival of a species**	**Disrupt the breeding cycle of an important population**	**Modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to be in decline?**	**Result in invasive species that are harmful to a vulnerable species being established in the vulnerable species habitat?**	**Introduce disease that may cause the species to decline?**	**Interfere substantially with the recovery of the species?**
Semon's Leaf-nosed Bat (**Vulnerable**) **Moderate potential to occur within the project site**	The project site clearing alignment occurs within generic potential Semon's Leaf-nosed Bat habitat. Suitable foraging habitat is determined to be present within the clearing alignment. The removal of 0.3 ha of suitable foraging habitat is proposed directly adjacent to existing transport infrastructure. Connectivity to extensive areas of suitable vegetation will be maintained as a result of the proposal. It is not considered that the proposal will lead to a long-term decrease of an important population.	No known roosting colonies are present within the project site. A minor area of foraging habitat is present and at most would represent a minor portion of a much larger foraging area. The proposal is not considered likely to reduce the area of occupancy of an important population.	Unlikely. This species is highly mobile in fragmented landscapes and the removal of this habitat will not restrict dispersal across the landscape.	The proposed clearing alignment is not considered likely to adversely affect habitat critical to the survival of the Ant Plant.	No known roosting colonies are present within the project site. A minor area of foraging habitat is present and at most would represent a minor portion of a much larger foraging area. The proposal is not considered likely to disrupt the breeding cycle of an important population.	Based on the extent of habitat proposed to be cleared and the lack of roosting habitat present in proximity to the project site, it is not considered likely that the proposal will modify destroy, isolate or decrease the availability or quality of habitat to the extent that the Semon's Leaf-nosed Bat is likely to be in decline.	Proposed works will not likely result in the introduction of invasive species to potential habitat. The clearing of this vegetation will not further impact on the adjacent vegetation. A VMP will be designed to manage retained vegetation during and post construction.	There are no infectious diseases of Semons's Leaf-nosed Bat that are currently known to result in high levels of mortality that could be inflicted during these works. It is thus unlikely that the proposed works will facilitate the spread of any diseases to the detriment of this species.	Based on the extent of habitat proposed to be cleared and the lack of roosting habitat present in proximity to the project site, it is not considered likely that the proposal will substantially interfere with the recovery of the species.

	Will the proposed works...								
Threatened Species	**Lead to a long-term decrease in the size of an important population?**	**Reduce the area of occupancy of an important population?**	**Fragment an existing important population into two or more populations?**	**Adversely affect habitat critical to the survival of a species**	**Disrupt the breeding cycle of an important population**	**Modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to be in decline?**	**Result in invasive species that are harmful to a vulnerable species being established in the vulnerable species habitat?**	**Introduce disease that may cause the species to decline?**	**Interfere substantially with the recovery of the species?**
Greater Large-eared Horseshoe Bat (**Vulnerable**) **Moderate potential to occur within the project site**	The project site clearing alignment occurs within generic potential Greater Large-eared Horseshoe Bat habitat. Suitable foraging habitat is determined to be present within the clearing alignment. No roosting habitat is located within the project site. The removal of 0.3 ha of suitable foraging habitat is proposed directly adjacent to existing transport infrastructure. Connectivity to extensive areas of suitable vegetation will be maintained as a result of the proposal. It is not considered that the proposal will lead to a long-term decrease of an important population.	No known roosting colonies are present within the project site. A minor area of foraging habitat is present and at most would represent a minor portion of a much larger foraging area. The proposal is not considered likely to reduce the area of occupancy of an important population.	Unlikely. This species is highly mobile in fragmented landscapes and the removal of this habitat will not restrict dispersal across the landscape.	The project site contains generic foraging habitat. There is a distinct lack of colonial roosting habitat within the project site. The proposed clearing alignment is not considered likely to adversely affect habitat critical to the survival of the Greater Large-eared Horseshoe Bat.	No known roosting colonies are present within the project site. A minor area of foraging habitat is present and at most would represent a minor portion of a much larger foraging area. The proposal is not considered likely to disrupt the breeding cycle of an important population.	Based on the extent of habitat proposed to be cleared and the lack of roosting habitat present in proximity to the project site, it is not considered likely that the proposal will modify destroy, isolate or decrease the availability or quality of habitat to the extent that the Greater Large-eared Horseshoe Bat is likely to be in decline.	Proposed works will not likely result in the introduction of invasive species to potential habitat. The clearing of this vegetation will not further impact on the adjacent vegetation. A VMP will be designed to manage retained vegetation during and post construction.	There are no infectious diseases of Greater Large-eared Horseshoe Bat that are currently known to result in high levels of mortality that could be inflicted during these works. It is thus unlikely that the proposed works will facilitate the spread of any diseases to the detriment of this species.	Based on the extent of habitat proposed to be cleared and the lack of roosting habitat present in proximity to the project site, it is not considered likely that the proposal will substantially interfere with the recovery of the species.

	Will the proposed works...								
Threatened Species	**Lead to a long-term decrease in the size of an important population?**	**Reduce the area of occupancy of an important population?**	**Fragment an existing important population into two or more populations?**	**Adversely affect habitat critical to the survival of a species**	**Disrupt the breeding cycle of an important population**	**Modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to be in decline?**	**Result in invasive species that are harmful to a vulnerable species being established in the vulnerable species habitat?**	**Introduce disease that may cause the species to decline?**	**Interfere substantially with the recovery of the species?**
White-throated Needletail (**Vulnerable**) **Moderate potential to occur within the project site**	The project site clearing alignment occurs within generic potential White-throated Needletail habitat. Suitable foraging habitat is determined to be present within the clearing alignment. This species does not breed on the Australian continent. The removal of 0.3 ha of suitable foraging habitat is proposed directly adjacent to existing transport infrastructure. Connectivity to extensive areas of suitable vegetation will be maintained as a result of the proposal. It is not considered that the proposal will lead to a long-term decrease of an important population.	No known roosting colonies are present within Australia. A minor area of foraging habitat is present and at most would represent a minor portion of a much larger foraging area. The proposal is not considered likely to reduce the area of occupancy of an important population.	Unlikely. This species is highly mobile in fragmented landscapes and the removal of this habitat will not restrict dispersal across the landscape.	The project site contains generic foraging habitat. There is a distinct lack of colonial roosting habitat within the project site. The proposed clearing alignment is not considered likely to adversely affect habitat critical to the survival of the Spectacled Flying Fox.	No known roosting colonies are present within the project site. A minor area of foraging habitat is present and at most would represent a minor portion of a much larger foraging area. The proposal is not considered likely to disrupt the breeding cycle of an important population.	Based on the extent of habitat proposed to be cleared and the lack of roosting habitat present in proximity to the project site, it is not considered likely that the proposal will modify destroy, isolate or decrease the availability or quality of habitat to the extent that the White-throated Needletail is likely to be in decline.	Proposed works will not likely result in the introduction of invasive species to potential habitat. The clearing of this vegetation will not further impact on the adjacent vegetation. A VMP will be designed to manage retained vegetation during and post construction.	There are no infectious diseases of White-throated Needletail that are currently known to result in high levels of mortality that could be inflicted during these works. It is thus unlikely that the proposed works will facilitate the spread of any diseases to the detriment of this species.	Based on the extent of habitat proposed to be cleared and the lack of roosting habitat present in proximity to the project site, it is not considered likely that the proposal will substantially interfere with the recovery of the species.

Appendix G NC Act 1992 Significant Residual Impact Assessment (SRI)

	An action is LIKELY to have an SRI on habitat for an animal that is 'endangered' or 'vulnerable' wildlife if the action will:							
	lead to a long-term decrease in the size of a local population?	**reduce the extent of occurrence of the species?**	**fragment an existing population?**	**result in genetically distinct populations forming as a result of habitat isolation?**	**result in invasive species that are harmful to an endangered or vulnerable species becoming established in the endangered or vulnerable species' habitat?**	**introduce disease that may cause the population to decline?**	**interfere with the recovery of the species;**	**cause disruption to ecologically significant locations (breeding, feeding, nesting, migration or resting sites) of a species**
Fauna								
Spectacled Flying-fox (**Endangered**) **Confirmed to be present within the project site**	The project site clearing alignment occurs within generic potential Spectacled Flying-fox habitat. Suitable foraging habitat is determined to be present within the clearing alignment. Seasonal roosting habitat is located within the project site located approximately 100m to the west. The removal of 0.3 ha of suitable foraging habitat is proposed directly adjacent to existing transport infrastructure. Connectivity to extensive areas of suitable vegetation will be maintained. It is not considered that the proposal will lead to a long-term decrease of a population.	A seasonal roosting colony of up to approximately 100 individuals was present (July 2024) within the project site. Outside of the winter Melaleuca blossoming period it is not likely that any individuals will be present. No portion of the seasonal roosting habitat will be impacted. A minor area of foraging habitat is present and at most would represent a minor portion of a much larger foraging area.	Unlikely. This species is highly mobile in fragmented landscapes and the removal of this habitat will not restrict dispersal across the landscape.	Habitat modification for proposed works will not be of a large enough extent to isolate populations of the Spectacled-flying Fox. This species would still freely move between remaining suitable habitat	Proposed works will not likely result in the introduction of invasive species to potential habitat. The clearing of this vegetation will not further impact on the adjacent vegetation. A VMP will be designed to manage retained vegetation during and post construction.	There are no infectious diseases of Spectacled Flying-fox that are currently known to result in high levels of mortality that could be inflicted during these works. It is thus unlikely that the proposed works will facilitate the spread of any diseases to the detriment of this species.	Given that minor clearing of generic foraging habitat and no roosting habitat will be impacted by the proposal, it is considered unlikely to interfere with the recovery of the species.	The proposed works are unlikely to disrupt ecologically significant locations for this species within the project site.

	An action is LIKELY to have an SRI on habitat for an animal that is 'endangered' or 'vulnerable' wildlife if the action will:							
	lead to a long-term decrease in the size of a local population?	**reduce the extent of occurrence of the species?**	**fragment an existing population?**	**result in genetically distinct populations forming as a result of habitat isolation?**	**result in invasive species that are harmful to an endangered or vulnerable species becoming established in the endangered or vulnerable species' habitat?**	**introduce disease that may cause the population to decline?**	**interfere with the recovery of the species;**	**cause disruption to ecologically significant locations (breeding, feeding, nesting, migration or resting sites) of a species**
Macleay's Fig Parrot (**Vulnerable)** **Confirmed to be present within the project site**	The project site clearing alignment occurs within generic potential Macleay's Fig Parrot habitat. Suitable foraging habitat is determined to be present within the clearing alignment (Large canopy fig trees). No evidence of denning habitat was located within the project site. Hollow nesting for this species is mostly associated with larger unfragmented patches of lowland rainforest. While a total removal of 0.3 ha of vegetation is proposed, only a fraction (if any) is deemed suitable habitat for this species (mostly freshwater and saltwater vegetation – little rainforest). Connectivity to extensive areas of suitable vegetation will be maintained. It is not considered that the proposal will lead to a long-term decrease of a population.	No likely hollow bearing tree utilisation was determined to be present within the project site. A minor area of foraging habitat is present and at most would represent a minor portion of a much larger foraging area.	Unlikely. This species is highly mobile in fragmented landscapes and the removal of this habitat will not restrict dispersal across the landscape.	Habitat modification for proposed works will not be of a large enough extent to isolate populations of the Macleay's Fig Parrot. This species would still freely move between remaining suitable habitat.	Proposed works will not likely result in the introduction of invasive species to potential habitat. The clearing of this vegetation will not further impact on the adjacent vegetation. A VMP will be designed to manage retained vegetation during and post construction.	There are no infectious diseases of Macleay's Fig Parrot that are currently known to result in high levels of mortality that could be inflicted during these works. It is thus unlikely that the proposed works will facilitate the spread of any diseases to the detriment of this species.	Given that very minor clearing of vegetation will result from the proposal, it is considered unlikely to interfere with the recovery of the species.	The proposed works are unlikely to disrupt ecologically significant locations for this species within the project site.

	An action is LIKELY to have an SRI on habitat for an animal that is 'endangered' or 'vulnerable' wildlife if the action will:							
	lead to a long-term decrease in the size of a local population?	**reduce the extent of occurrence of the species?**	**fragment an existing population?**	**result in genetically distinct populations forming as a result of habitat isolation?**	**result in invasive species that are harmful to an endangered or vulnerable species becoming established in the endangered or vulnerable species' habitat?**	**introduce disease that may cause the population to decline?**	**interfere with the recovery of the species;**	**cause disruption to ecologically significant locations (breeding, feeding, nesting, migration or resting sites) of a species**
Estuarine Crocodile (**Vulnerable**) **Confirmed to be present within the project site**	The project site clearing alignment occurs within generic potential Estuarine Crocodile habitat. Suitable foraging and breeding habitat is determined to be present within the clearing alignment RE 7.1.1, RE 7.1.4, RE 7.1.5, RE 7.3.5a. A total clearance of 0.3 ha will occur as a result of the proposal. The removal of some suitable foraging habitat is proposed directly adjacent to existing transport infrastructure. Connectivity to extensive areas of suitable vegetation will be maintained. It is not considered that the proposal will lead to a long-term decrease of a population.	The removal of 0.3 ha of suitable habitat for the estuarine crocodile is considered at most would represent a minor portion of a much larger foraging area.	Unlikely. This species is highly mobile, and connectivity will be maintained via the Daintree River. The removal of up to 0.3 ha of mangrove habitat will not restrict dispersal across the landscape.	Habitat modification for proposed works will not be of a large enough extent to isolate populations of the Estuarine Crocodile. This species would still freely move up and downstream on the Daintree River where significant continuous mangrove habitat will remain.	Proposed works will not likely result in the introduction of invasive species to potential habitat. The clearing of this vegetation will not further impact on the adjacent vegetation. A VMP will be designed to manage retained vegetation during and post construction.	There are no infectious diseases of Estuarine Crocodile that are currently known to result in high levels of mortality that could be inflicted during these works. It is thus unlikely that the proposed works will facilitate the spread of any diseases to the detriment of this species.	Given that only minor clearing of generic foraging habitat will be impacted because of the proposal, it is considered unlikely to interfere with the recovery of the species.	The proposed works are unlikely to disrupt ecologically significant locations for this species within the project site.
Ant Plant (**Vulnerable**)	The project site clearing alignment occurs within generic potential Ant Plant habitat. A protected plant survey was undertaken within 100m of the proposed clearing alignment and no individuals were recorded. Given that no individuals will be cleared, it is not considered that the proposal will lead to a long-term decrease of a population.	No likely hollow bearing tree utilisation was determined to be present within the project site. A minor area of foraging habitat is present and at most would represent a minor portion of a much larger foraging area.	Unlikely. This species is highly mobile in fragmented landscapes and the removal of this habitat will not restrict dispersal across the landscape.	Habitat modification for proposed works will not be of a large enough extent to isolate populations of the Ant plant. This species would still freely move between remaining suitable habitat.	Proposed works will not likely result in the introduction of invasive species to potential habitat. The clearing of this vegetation will not further impact on the adjacent vegetation. A VMP will be designed to manage retained vegetation during and post construction.	There are no infectious diseases of Macleay's Fig Parrot that are currently known to result in high levels of mortality that could be inflicted during these works. It is thus unlikely that the proposed works will facilitate the spread of any diseases to the detriment of this species.	Given that minor clearing of generic foraging habitat and no roosting habitat will be impacted as a result of the proposal it is considered unlikely to interfere with the recovery of the species.	The proposed works are unlikely to disrupt ecologically significant locations for this species within the project site.

	An action is LIKELY to have an SRI on habitat for an animal that is 'endangered' or 'vulnerable' wildlife if the action will:							
	lead to a long-term decrease in the size of a local population?	**reduce the extent of occurrence of the species?**	**fragment an existing population?**	**result in genetically distinct populations forming as a result of habitat isolation?**	**result in invasive species that are harmful to an endangered or vulnerable species becoming established in the endangered or vulnerable species' habitat?**	**introduce disease that may cause the population to decline?**	**interfere with the recovery of the species;**	**cause disruption to ecologically significant locations (breeding, feeding, nesting, migration or resting sites) of a species**
Pale-chandelier Orchid (**Vulnerable**)	The project site clearing alignment occurs within generic potential Ant Plant habitat. A protected plant survey was undertaken within 100m of the proposed clearing alignment and no individuals were recorded. Given that no individuals will be cleared as a result of the proposal. It is not considered that the proposal will lead to a long-term decrease of a population.	No likely hollow bearing tree utilisation was determined to be present within the project site. A minor area of foraging habitat is present and at most would represent a minor portion of a much larger foraging area.	Unlikely. This species is highly mobile in fragmented landscapes and the removal of this habitat will not restrict dispersal across the landscape.	Habitat modification for proposed works will not be of a large enough extent to isolate populations of the Macleay's Fig Parrot. This species would still freely move between remaining suitable habitat.	Proposed works will not likely result in the introduction of invasive species to potential habitat. The clearing of this vegetation will not further impact on the adjacent vegetation. A VMP will be designed to manage retained vegetation during and post construction.	There are no infectious diseases of Macleay's Fig Parrot that are currently known to result in high levels of mortality that could be inflicted during these works. It is thus unlikely that the proposed works will facilitate the spread of any diseases to the detriment of this species.	Given that minor clearing of generic foraging habitat and no roosting habitat will be impacted as a result of the proposal it is considered unlikely to interfere with the recovery of the species.	The proposed works are unlikely to disrupt ecologically significant locations for this species within the project site.
Blue Antler Orchid (**Endangered**) **Confirmed to be present within the project site**	The project site clearing alignment occurs within confirmed Pale Chandelier Orchid habitat. A protected plant survey was undertaken within 100m of the proposed clearing alignment and 23 individual plants were recorded within RE 7.1.1. No individuals were recorded within the direct clearing alignment. Given that no individuals will be cleared as a result of the proposal. It is not considered that the proposal will lead to a long-term decrease of an important population.	No individuals were recorded within the direct clearing alignment. An impact management plan has been produced to inform management of the habitat. Given this, the proposal is not considered likely to reduce the area of occupancy of an important population.	No individuals will be cleared as a result of the proposal. All clearing will be on existing clearing edges.	The vegetation proposed to be cleared does not contain any Blue Antler Orchids. The proposed clearing alignment is not considered likely to adversely affect habitat critical to the survival of the species.	The vegetation proposed to be cleared does not contain any Blue Antler Orchids. The proposed clearing alignment is not considered likely to adversely affect habitat critical to the survival of the species.	Based on the extent of habitat proposed to be cleared and the lack of roosting habitat present in proximity to the project site, it is not considered likely that the proposal will modify destroy, isolate or decrease the availability or quality of habitat to the extent that this species is likely to be in decline.	Proposed works will not likely result in the introduction of invasive species to potential habitat. The clearing of this vegetation will not further impact on the adjacent vegetation. An impact management plan will be designed to manage retained vegetation during and post construction.	There are no infectious diseases of the Blue Antler Orchid that are currently known to result in high levels of mortality that could be inflicted during these works. It is thus unlikely that the proposed works will facilitate the spread of any diseases to the detriment of this species.

	An action is LIKELY to have an SRI on habitat for an animal that is 'endangered' or 'vulnerable' wildlife if the action will:							
	lead to a long-term decrease in the size of a local population?	**reduce the extent of occurrence of the species?**	**fragment an existing population?**	**result in genetically distinct populations forming as a result of habitat isolation?**	**result in invasive species that are harmful to an endangered or vulnerable species becoming established in the endangered or vulnerable species' habitat?**	**introduce disease that may cause the population to decline?**	**interfere with the recovery of the species;**	**cause disruption to ecologically significant locations (breeding, feeding, nesting, migration or resting sites) of a species**
Rhodamnia sessiliflora **(Endangered) Confirmed to be present within the project site**	*R. sessiliflora* is located along the southern and northern banks of the Daintree River adjacent to the proposed clearing alignment. A protected plant survey was undertaken within 100 m of the proposed clearing alignment and determined that no individuals area required to be cleared as a result of the proposal. No part of the proposal has the potential to lead to a long-term decrease in the size of a local population.	*R. sessiliflora* is located along the southern bank of the Daintree River. No removal of individuals is required as a result of the proposal. No part of the proposal has the potential to lead to a reduction in the extent of occurrence. The proposal is unlikely to reduce the extent of occurrence.	The species is largely restricted to the edges and creek lines of well-developed rainforest communities. The riparian vegetation along the southern bank of the Daintree River will continue to function as a naturally seasonally disturbed waterway. If fruit is produced it will continue to disperse along suitable habitat from small mammal and bird dispersal. No impact to dispersal is expected to occur as a result of the proposal.	The species is largely restricted to the edges and creek lines of well-developed rainforest communities. The riparian vegetation along the southern bank of the Daintree River. This system will continue to function as a naturally seasonally disturbed waterway. If fruit is produced, it will continue to disperse along suitable habitat from small mammal and bird dispersal. No impact to dispersal is expected to occur as a result of the proposal that would result in a genetically distinct population.	Proposed works will not likely result in the introduction of invasive species to potential habitat. No clearing is proposed. A VMP will be designed to mitigate weed incursion to all retained habitat within the project site.	The population present within the project site was recorded to be infected with myrtle-rust. With an absence of proposed clearing of individuals, it is not expected that the proposal would increase infection rates of this disease beyond what is already present. However important steps should be taken into consideration regarding minimising the spread of myrtle-rust on-site (see Appendix F for this species). Myrtle-rust (*Austropuccinia psidii*) is a highly-infectious and often fatal disease affecting myrtaceous plant species in Australia. An impact management plan (IMP) will be produced to inform management of this impact.	The population present within the project site was recorded to be infected with myrtle-rust. With an absence of proposed clearing of individuals, it is not expected that the proposal would increase infection rates of this disease beyond what is already present. However important steps should be taken into consideration regarding minimising the spread of myrtle-rust on-site (see Appendix F for this species).	The proposed works are unlikely to disrupt ecologically significant locations for this species on-site.

	An action is LIKELY to have an SRI on habitat for an animal that is 'endangered' or 'vulnerable' wildlife if the action will:							
	lead to a long-term decrease in the size of a local population?	**reduce the extent of occurrence of the species?**	**fragment an existing population?**	**result in genetically distinct populations forming as a result of habitat isolation?**	**result in invasive species that are harmful to an endangered or vulnerable species becoming established in the endangered or vulnerable species' habitat?**	**introduce disease that may cause the population to decline?**	**interfere with the recovery of the species;**	**cause disruption to ecologically significant locations (breeding, feeding, nesting, migration or resting sites) of a species**
Rhodomyrtus effusa **(Endangered) Confirmed to be present within the project site**	*R. effusa* is located along the northern bank of the Daintree River adjacent to the proposed clearing alignment. A protected plant survey was undertaken within 100 m of the proposed clearing alignment and determined that no individuals area required to be cleared as a result of the proposal. No part of the proposal has the potential to lead to a long-term decrease in the size of a local population.	*R. effusa* is located along the northern bank of the Daintree River. No removal of individuals is required as a result of the proposal. No part of the proposal has the potential to lead to a reduction in the extent of occurrence. The proposal is unlikely to reduce the extent of occurrence.	The species is largely restricted to the edges and creek lines of well-developed rainforest communities. The riparian vegetation along the southern bank of the Daintree River will continue to function as a naturally seasonally disturbed waterway. If fruit is produced it will continue to disperse along suitable habitat from small mammal and bird dispersal. No impact to dispersal is expected to occur as a result of the proposal.	The species is largely restricted to the edges and creek lines of well-developed rainforest communities. The riparian vegetation along the southern bank of the Daintree River. This system will continue to function as a naturally seasonally disturbed waterway. If fruit is produced, it will continue to disperse along suitable habitat from small mammal and bird dispersal. No impact to dispersal is expected to occur as a result of the proposal that would result in a genetically distinct population.	Proposed works will not likely result in the introduction of invasive species to potential habitat. No clearing is proposed. A VMP will be designed to mitigate weed incursion to all retained habitat within the project site.	The population present within the project site was recorded to be infected with myrtle-rust. With an absence of proposed clearing of individuals, it is not expected that the proposal would increase infection rates of this disease beyond what is already present. However important steps should be taken into consideration regarding minimising the spread of myrtle-rust on-site (see Appendix F for this species). An impact management plan (IMP) will be produced to inform management of this impact.	The population present within the project site was recorded to be infected with myrtle-rust. With an absence of proposed clearing of individuals, it is not expected that the proposal would increase infection rates of this disease beyond what is already present. However important steps should be taken into consideration regarding minimising the spread of myrtle-rust on-site (see Appendix F for this species).	The proposed works are unlikely to disrupt ecologically significant locations for this species on-site.
White-throated Needletail (**Vulnerable**) **Moderate potential to occur within the project site**	A minimal amount of habitat for this species is found on site. As such, it is unlikely that proposed works will significantly cause a decrease in this species population.	Breeding habitat is not present within the project site. Generic feeding habitat above the canopy is present and at most would represent a minor portion of a much larger foraging area.	Unlikely. This species is highly mobile in fragmented landscapes and the lack of removal of this habitat will not restrict dispersal across the landscape.	Habitat modification for proposed works will not be of a large enough extent to isolate populations. This species would still freely move between remaining suitable habitat.	Proposed works will not likely result in the introduction of invasive species to potential habitat. The clearing of this vegetation will not further impact on the adjacent vegetation.	There are no infectious diseases of White-throated Needletail that are currently known to result in high levels of mortality that could be inflicted during these works. It is thus unlikely that the proposed works will facilitate the spread of any diseases to the detriment of this species.	Given the minor extent of habitat clearance required as a result of the proposal it is considered unlikely to interfere with the recovery of the species.	The proposed works are unlikely to disrupt ecologically significant locations for this species within the project site.

	An action is LIKELY to have an SRI on habitat for an animal that is 'endangered' or 'vulnerable' wildlife if the action will:							
	lead to a long-term decrease in the size of a local population?	**reduce the extent of occurrence of the species?**	**fragment an existing population?**	**result in genetically distinct populations forming as a result of habitat isolation?**	**result in invasive species that are harmful to an endangered or vulnerable species becoming established in the endangered or vulnerable species' habitat?**	**introduce disease that may cause the population to decline?**	**interfere with the recovery of the species;**	**cause disruption to ecologically significant locations (breeding, feeding, nesting, migration or resting sites) of a species**
Bennett's Tree Kangaroo **(Near Threatened)** **Likely potential to occur within the project site**	The project site clearing alignment occurs within generic potential Bennet's Tree Kangaroo habitat. Suitable foraging habitat is determined to be present within the clearing alignment. While a total removal of 0.3 ha of vegetation is proposed, only a fraction (if any) is deemed suitable habitat for this species (mostly freshwater and saltwater vegetation – little rainforest); very little of RE 7.3.23a is proposed to be removed. Connectivity to extensive areas of suitable vegetation will be maintained. It is not considered that the proposal will lead to a long-term decrease of a population.	A minor area of foraging habitat is present and at most would represent a minor portion of a much larger foraging area.	Unlikely. As vegetation clearing is restricted to existing transport infrastructure, the removal of this habitat will not restrict dispersal across the landscape.	Habitat modification for proposed works will not be of a large enough extent to isolate populations of the Bennet's Tree Kangaroo. This species would be able to freely move between remaining suitable habitat	Proposed works will not likely result in the introduction of invasive species to potential habitat. The clearing of this vegetation will not further impact on the adjacent vegetation. A VMP will be designed to manage retained vegetation during and post construction.	There are no infectious diseases of Bennet's Tree Kangaroo that are currently known to result in high levels of mortality that could be inflicted during these works. It is thus unlikely that the proposed works will facilitate the spread of any diseases to the detriment of this species.	Given that minor clearing of generic foraging habitat and no roosting habitat will be impacted as a result of the proposal it is considered unlikely to interfere with the recovery of the species.	The proposed works are unlikely to disrupt ecologically significant locations for this species within the project site.
Greater Large-eared Horseshoe Bat **(Endangered)** **Moderate potential to occur within the project site**	The project site clearing alignment occurs within generic potential Greater Large-eared Horseshoe Bat habitat. Suitable foraging habitat is determined to be present within the clearing alignment. The removal of 0.3 ha of suitable foraging habitat is proposed directly adjacent to existing transport infrastructure. Connectivity to extensive areas of suitable vegetation will be maintained. It is not considered that the proposal will lead to a long-term decrease of a population.	A minor area of foraging habitat is present and at most would represent a minor portion of a much larger foraging area.	Unlikely. This species is highly mobile in fragmented landscapes and the removal of this habitat will not restrict dispersal across the landscape.	Habitat modification for proposed works will not be of a large enough extent to isolate populations of the Greater Large-eared Horseshoe Bat. This species would still freely move between remaining suitable habitat	Proposed works will not likely result in the introduction of invasive species to potential habitat. The clearing of this vegetation will not further impact on the adjacent vegetation. A VMP will be designed to manage retained vegetation during and post construction.	There are no infectious diseases of Spectacled Flying-fox that are currently known to result in high levels of mortality that could be inflicted during these works. It is thus unlikely that the proposed works will facilitate the spread of any diseases to the detriment of this species.	Given that minor clearing of generic foraging habitat and no roosting habitat will be impacted as a result of the proposal it is considered unlikely to interfere with the recovery of the species.	The proposed works are unlikely to disrupt ecologically significant locations for this species within the project site.

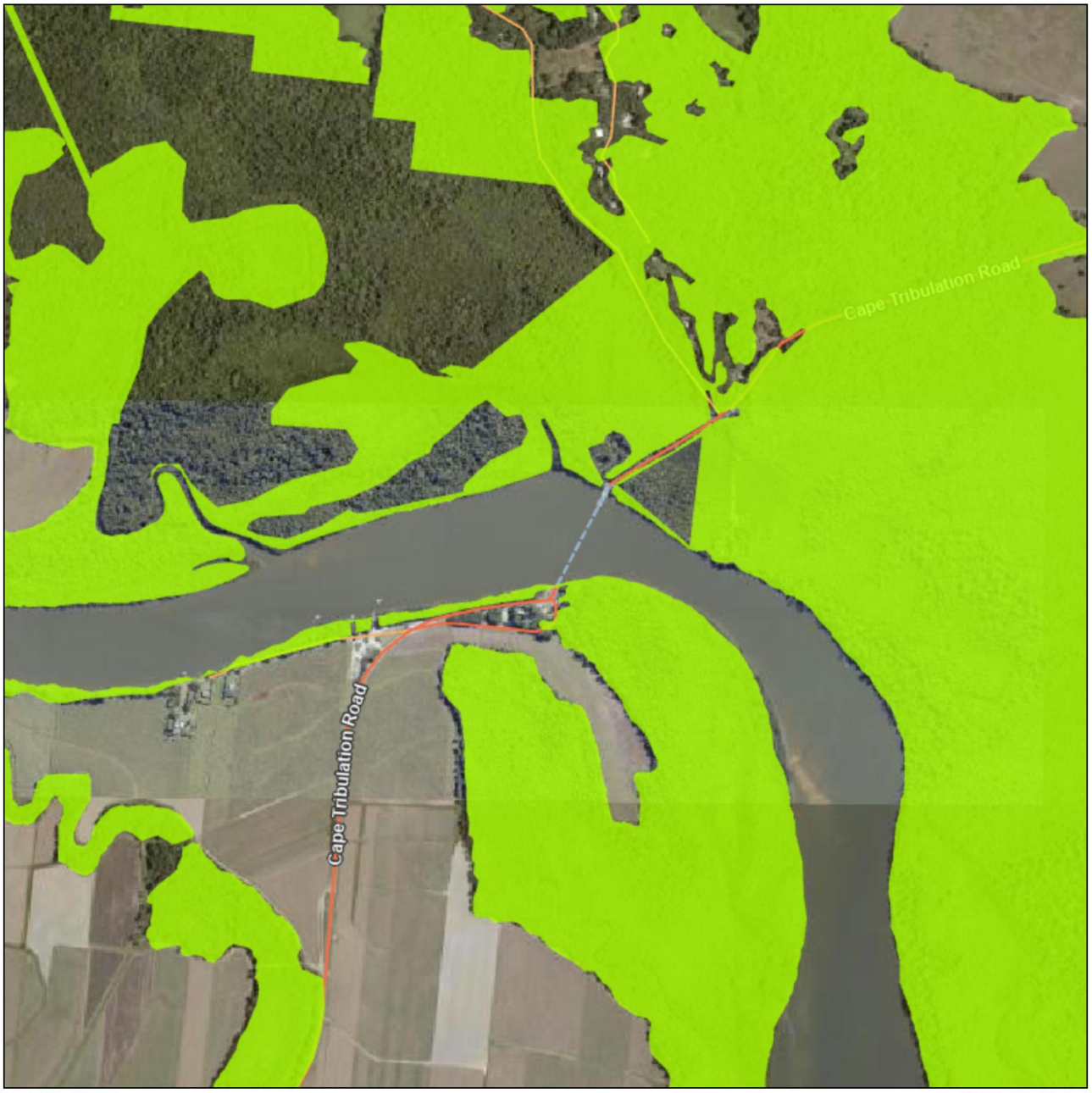
	An action is LIKELY to have an SRI on habitat for an animal that is 'endangered' or 'vulnerable' wildlife if the action will:							
	lead to a long-term decrease in the size of a local population?	**reduce the extent of occurrence of the species?**	**fragment an existing population?**	**result in genetically distinct populations forming as a result of habitat isolation?**	**result in invasive species that are harmful to an endangered or vulnerable species becoming established in the endangered or vulnerable species' habitat?**	**introduce disease that may cause the population to decline?**	**interfere with the recovery of the species;**	**cause disruption to ecologically significant locations (breeding, feeding, nesting, migration or resting sites) of a species**
Semon's Leaf-nosed Bat **(Endangered)** **Moderate potential to occur within the project site**	The project site clearing alignment occurs within generic potential Semon's Leaf-nosed Bat habitat. Suitable foraging habitat is determined to be present within the clearing alignment. The removal of 0.3 ha of suitable foraging habitat is proposed directly adjacent to existing transport infrastructure. Connectivity to extensive areas of suitable vegetation will be maintained. It is not considered that the proposal will lead to a long-term decrease of a population.	A minor area of foraging habitat is present and at most would represent a minor portion of a much larger foraging area.	Unlikely. This species is highly mobile in fragmented landscapes and the removal of this habitat will not restrict dispersal across the landscape.	Habitat modification for proposed works will not be of a large enough extent to isolate populations of the Greater Large-eared Horseshoe Bat. This species would still freely move between remaining suitable habitat.	Proposed works will not likely result in the introduction of invasive species to potential habitat. The clearing of this vegetation will not further impact on the adjacent vegetation. A VMP will be designed to manage retained vegetation during and post construction.	There are no infectious diseases of Spectacled Flying-fox that are currently known to result in high levels of mortality that could be inflicted during these works. It is thus unlikely that the proposed works will facilitate the spread of any diseases to the detriment of this species.	Given that minor clearing of generic foraging habitat and no roosting habitat will be impacted as a result of the proposal it is considered unlikely to interfere with the recovery of the species.	The proposed works are unlikely to disrupt ecologically significant locations for this species within the project site.

Appendix H Flora Trigger Mapping

Flora Trigger (Protected Plants) Mapping

Daintree Ferry - PPS 2024

16°14'51"S 145°23'4"E 16°14'51"S 145°24'37"E



16°16'20"S 145°23'4"E 16°16'20"S 145°24'37"E

A product of Queensland Globe

– Flora trigger area

N

0 250 metres

Scale: 1:14398

Printed at: A4

Print date: 23/7/2024

Not suitable for accurate measurement.

Projection: Web Mercator EPSG 102100 (3857)

For more information, visit https://qldglobe.information.qld.gov.au/help-info/Contact-us.html

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Queensland Government
Department of Resources

Appendix I Complete Flora List (red indicates EVNT species)

Form	Family	Species Name	Common Name	NC Act	EPBC Act	Fisheries Act	Vine forest/paperbark	Mangroves	Exotic sp.	EDL
Cycad	Zamiaceae	*Bowenia spectabilis*		SLC	LC		●			
Epiphyte	Ophioglossaceae	*Ophioderma pendulum*	old-world adder's-tongue	LC	LC		●			
Epiphyte	Orchidaceae	*Acriopsis emarginata*	pale chandelier orchid	VU	VU			●		
Epiphyte	Orchidaceae	*Cymbidium madidum*	giant boat-lip orchid	SLC	LC		●			
Epiphyte	Orchidaceae	*Dendrobium nindii*	blue antler orchid	EN	EN			●		
Epiphyte	Orchidaceae	*Dendrobium teretifolium*	pencil orchid	SLC	LC		●			
Epiphyte	Orchidaceae	*Dendrobium trilamellatum*	fragrant tea-tree orchid	SLC	LC		●			
Epiphyte	Orchidaceae	*Dendrobium undulatum*	golden orchid	SLC	LC		●	●		
Epiphyte	Orchidaceae	*Luisia atacta*	smooth velvet orchid	SLC	LC			●		
Epiphyte	Orchidaceae	*Oberonia crateriformis*	cratered fairy-orchid	SLC	LC			●		
Epiphyte	Orchidaceae	*Pinalia moluccana*	common gremlin orchid	SLC	LC			●		
Epiphyte	Rubiaceae	*Myrmecodia beccarii*	ant-plant	VU	VU			●		
Fern and allies	Aspleniaceae	*Asplenium nidus*	bird's-nest fern	LC	LC		●			
Fern and allies	Blechnaceae	*Stenochlaena palustris*		LC	LC			●		
Fern and allies	Cyatheaceae	*Cyathea rebeccae*	black tree-fern	LC	LC		●			
Fern and allies	Gleicheniaceae	*Dicranopteris linearis*	uluhe	LC	LC		●			
Fern and allies	Lycopodiaceae	*Phlegmariurus harmsii*	coarse tassel-fern	SLC	LC		●			
Fern and allies	Lygodiaceae	*Lygodium microphyllum*	climbing maidenhair-fern	LC	LC		●	●		
Fern and allies	Nephrolepidaceae	*Nephrolepis biserrata*	fishbone fern	LC	LC		●		●	
Fern and allies	Polypodiaceae	*Aglaomorpha rigidula*	basket fern	LC	LC		●	●		
Fern and allies	Polypodiaceae	*Platycerium hillii*	northern elkhorn	LC	LC		●			
Fern and allies	Polypodiaceae	*Pyrrosia longifolia*		LC	LC		●			
Fern and allies	Pteridaceae	*Acrostichum speciosum*	mangrove fern	LC	LC	MP		●		
Fern and allies	Pteridaceae	*Adiantum diaphanum*	filmy maidenhair-fern	LC	LC		●			
Herbs and graminoids	Acanthaceae	*Pseuderanthemum variable*	love flower	LC	LC		●			
Herbs and graminoids	Amaranthaceae	*Alternanthera ficoidea*		LC	LC		●		●	
Herbs and graminoids	Amaryllidaceae	*Crinum pedunculatum*	swamp lily	LC	LC			●		
Herbs and graminoids	Apiaceae	*Centella asiatica*	centella	LC	LC		●	●		
Herbs and graminoids	Asparagaceae	*Lomandra hystrix*	creek mat-rush	LC	LC		●			
Herbs and graminoids	Asparagaceae	*Sansevieria* sp.	mother-in-law's-tongue	LC	LC		●			
Herbs and graminoids	Asphodelaceae	*Dianella atraxis*		LC	LC		●			
Herbs and graminoids	Asphodelaceae	*Dianella bambusifolia*		LC	LC		●			
Herbs and graminoids	Asteraceae	*Ageratum houstonianum*	blue billygoat-weed	LC	LC		●		●	
Herbs and graminoids	Asteraceae	*Eclipta prostrata*	false daisy	LC	LC			●	●	
Herbs and graminoids	Asteraceae	*Elephantopus scaber*	prickly-leaved elephant's foot	LC	LC		●		●	
Herbs and graminoids	Asteraceae	*Sigesbeckia orientalis*	common st Paul's-wort	LC	LC		●			

Form	Family	Species Name	Common Name	NC Act	EPBC Act	Fisheries Act	Vine forest/paperbark	Mangroves	Exotic sp.	EDL
Herbs and graminoids	Asteraceae	*Spagneticola trilobata*	Singapore daisy	LC	LC			●	●	
Herbs and graminoids	Commelinaceae	*Aneilema acuminatum*		LC	LC		●			
Herbs and graminoids	Commelinaceae	*Commelina benghalensis*	Benghal dayflower	LC	LC		●		●	
Herbs and graminoids	Cyperaceae	*Baumea rubiginosa*		LC	LC		●			
Herbs and graminoids	Cyperaceae	*Cyperus aromaticus*	navua sedge	LC	LC		●		●	
Herbs and graminoids	Cyperaceae	*Cyperus haspan*	dwarf papyrus sedge	LC	LC					
Herbs and graminoids	Cyperaceae	*Gahnia sieberiana*	small-fruited saw-sedge	LC	LC		●			
Herbs and graminoids	Fabaceae	*Aeschynomene indica*	budda pea	LC	LC		●			
Herbs and graminoids	Fabaceae	*Centrosema molle*	butterfly pea	LC	LC		●		●	
Herbs and graminoids	Fabaceae	*Crotalaria pallida*	smooth crotalaria	LC	LC		●		●	
Herbs and graminoids	Fabaceae	*Dalbergia candenatensis*		LC	LC		●		●	
Herbs and graminoids	Fabaceae	*Macroptilium atropurpureum*	siratro	LC	LC		●		●	
Herbs and graminoids	Fabaceae	*Mimosa pudica*	sensitive-plant	LC	LC		●		●	
Herbs and graminoids	Malvaceae	*Abelmoschus moschatus* subsp. *tuberosus*	native marsh-mallow	LC	LC		●			
Herbs and graminoids	Malvaceae	*Sida acuta*	common wireweed	LC	LC				●	
Herbs and graminoids	Melastomataceae	*Heterotis rotundifolia*	Spanish shawl	LC	LC		●		●	
Herbs and graminoids	Poaceae	*Axonocarpus compressus*	broad-leaved carpet grass	LC	LC				●	
Herbs and graminoids	Poaceae	*Eragrostis* sp.		LC	LC		●			
Herbs and graminoids	Poaceae	*Hymenachne amplexicaulis*	olive hymenachne	LC	LC		●		●	
Herbs and graminoids	Poaceae	*Megathyrsus maximus* var. *maximus*	green panic	LC	LC		●		●	
Herbs and graminoids	Poaceae	*Oplismenus* sp.		LC	LC		●			
Herbs and graminoids	Poaceae	*Sporobolus virginicus*	saltwater couch	LC	LC	MP	●	●		
Herbs and graminoids	Polygalaceae	*Polygala paniculata*	deep heat weed	LC	LC		●		●	
Herbs and graminoids	Rubiaceae	*Spermacoce latifolia*	winged false buttonweed	LC	LC		●		●	
Herbs and graminoids	Verbenaceae	*Stachytarpheta jamaicensis*	snakeweed	LC	LC		●		●	
Parasite	Loranthaceae	*Amylotheca dictyophleba*		LC	LC		●			
Parasite	Loranthaceae	*Dendrophthoe curvata*		LC	LC			●		
Shrub	Acanthaceae	*Acanthus ilicifolius*	holly mangrove	LC	LC	MP		●		
Shrub	Annonaceae	*Xylopia maccreae*		LC	LC		●			
Shrub	Apocynaceae	*Tabernaemontana orientalis*	banana bush	LC	LC		●			
Shrub	Apocynaceae	*Wrightia laevis*		LC	LC		●			
Shrub	Araceae	*Colocasia esculenta*	taro	LC	LC			●	●	
Shrub	Arecaceae	*Calamus australis*	wait-a-while	LC	LC		●			
Shrub	Arecaceae	*Licuala ramsayi*	fan palm	LC	LC		●			
Shrub	Asparagaceae	*Cordyline cannifolia*		LC	LC		●			
Shrub	Asparagaceae	*Dracaena fragrans*	corn plant	LC	LC		●		●	
Shrub	Bromeliaceae	*Ananas comsus*	pineapple	LC	LC		●		●	
Shrub	Calophyllaceae	*Calophyllum australianum*		LC	LC		●			
Shrub	Cannabaceae	*Trema* sp.		LC	LC		●			

Form	Family	Species Name	Common Name	NC Act	EPBC Act	Fisheries Act	Vine forest/paperbark	Mangroves	Exotic sp.	EDL
Shrub	Costaceae	*Cheilocostus speciosus*		LC	LC		●		●	
Shrub	Ebenaceae	*Diospyros* sp.		LC	LC		●			
Shrub	Euphorbiaceae	*Breynia cernua*	fart bush	LC	LC		●			
Shrub	Euphorbiaceae	*Excoecaria agallocha*	blind-your-eye mangrove	LC	LC	MP		●		
Shrub	Euphorbiaceae	*Homalanthus novo-guineense*	bleeding heart	LC	LC		●			
Shrub	Euphorbiaceae	*Macaranga subdentata*	needlebark	LC	LC		●			
Shrub	Fabaceae	*Archidendron lucyi*	scarlet bean	LC	LC		●			
Shrub	Heliconiaceae	*Heliconia psittacorum*	parrot heliconia	LC	LC		●		●	
Shrub	Lamiaceae	*Clerodendrum phlomidis*		LC	LC		●			
Shrub	Lamiaceae	*Gmelina fasciculiflora*	northern white beech	LC	LC		●			
Shrub	Lauraceae	*Beilschmiedia obtusifolia*	blush walnut	LC	LC		●			
Shrub	Lauraceae	*Cryptocarya hypospodia*	white sycamore	LC	LC		●			
Shrub	Lauraceae	*Cryptocarya laevigata*	glossy laurel	LC	LC		●			
Shrub	Lauraceae	*Cryptocarya murrayi*	Murray's laurel	LC	LC		●			
Shrub	Lauraceae	*Litsea bindoniana*	big-leaved bollywood	LC	LC		●			
Shrub	Lauraceae	*Litsea leefeana*	brown bolly gum	LC	LC		●			
Shrub	Lauraceae	*Neolitsea dealbata*	white bolly gum	LC	LC		●			
Shrub	Malvaceae	*Sterculia quadrifida*	peanut tree	LC	LC		●			
Shrub	Malvaceae	*Urena lobata*	Congo jute	LC	LC			●	●	
Shrub	Melastomataceae	*Melastoma malabathricum*	blue-tongue	LC	LC		●			
Shrub	Meliaceae	*Dysoxylum arborescens*	Mossman mahogany	LC	LC		●			
Shrub	Monimiaceae	*Austromatthaea elegans*		LC	LC		●			
Shrub	Monimiaceae	*Wilkiea pubescens*		LC	LC		●			
Shrub	Moraceae	*Ficus congesta*	red-leaved fig	LC	LC		●			
Shrub	Musaceae	*Musa* sp.	banana	LC	LC		●		●	
Shrub	Myristicaceae	*Myristica globosa*	native nutmeg	LC	LC		●			
Shrub	Myristicaceae	*Myristica insipida*	Queensland nutmeg	LC	LC		●			
Shrub	Myrtaceae	*Archirhodomyrtus beckleri*	small-leaved myrtle	LC	LC		●			
Shrub	Myrtaceae	*Rhodamnia sessiliflora*	iron malletwood	EN	LC		●			
Shrub	Myrtaceae	*Rhodomyrtus effusa*		EN	LC		●			
Shrub	Myrtaceae	*Rhodomyrtus macrocarpa*		LC	LC		●			
Shrub	Pandanaceae	*Pandanus gemmifer*	pup pandan	LC	LC		●			
Shrub	Phyllanthaceae	*Phyllanthus cuscutiflorus*	pink phyllanthus	LC	LC		●			
Shrub	Poaceae	*Bambusa* sp.		LC	LC		●		●	
Shrub	Primulaceae	*Aegiceras corniculatum*	river mangrove	LC	LC	MP		●		
Shrub	Primulaceae	*Myrsine porosa*	red muttonwood	LC	LC		●			
Shrub	Proteaceae	*Grevillea edelfeltii*	white oak	LC	LC		●			
Shrub	Proteaceae	*Helicia nortoniana*		LC	LC		●			
Shrub	Rubiaceae	*Cyclophyllum coprosmoides*	coast canthium	LC	LC		●			

Form	Family	Species Name	Common Name	NC Act	EPBC Act	Fisheries Act	Vine forest/paperbark	Mangroves	Exotic sp.	EDL
Shrub	Rubiaceae	*Cyclophyllum multiflorum*		LC	LC		●			
Shrub	Rubiaceae	*Randia audasii*	Daintree gardenia	NT	LC		●			
Shrub	Salicaceae	*Scolopia braunii*	flintwood	LC	LC		●			
Shrub	Sapindaceae	*Allophylus cobbe*	titberry	LC	LC		●			
Shrub	Sapindaceae	*Cupaniopsis foveolata*	white tamarind	LC	LC		●			
Shrub	Sapindaceae	*Harpullia rhyticarpa*	slender harpullia	LC	LC		●			
Shrub	Symplocaceae	*Symplocos cyanocarpa*		LC	LC		●			
Shrub	Thymelaeaceae	*Phaleria clerodendrum*	scented daphne	LC	LC		●			
Shrub	Zingiberaceae	*Hornstedtia scottiana*	native cardamom	LC	LC		●			
Tree	Anacardiaceae	*Blepharocarya involucrigera*	rose butternut	LC	LC		●			
Tree	Anacardiaceae	*Buchanania arborescens*	sparrow's mango	LC	LC		●			
Tree	Anacardiaceae	*Euroschinus falcatus*	maidenwood	LC	LC		●			
Tree	Anacardiaceae	*Mangifera indica*	mango	LC	LC		●		●	
Tree	Apocynaceae	*Alstonia muelleriana*	hard milkwood	LC	LC		●			●
Tree	Apocynaceae	*Alstonia scholaris*	blackboard tree	LC	LC		●			
Tree	Apocynaceae	*Cerbera floribunda*	cassowary plum	LC	LC		●			●
Tree	Araliaceae	*Heptapleurum actinophyllum*	umbrella tree	LC	LC		●			
Tree	Araliaceae	*Polyscias australiana*	ivory basswood	LC	LC		●			
Tree	Arecaceae	*Archontophoenix alexandrae*	alexandra palm	LC	LC		●			
Tree	Arecaceae	*Caryota mitis*	fishtail palm	LC	LC		●		●	
Tree	Arecaceae	*Cocos nucifera*	coconut	LC	LC		●			
Tree	Arecaceae	*Normanbya normanbyi*	black palm	LC	LC		●			
Tree	Arecaceae	*Ptychosperma elegans*	solitaire palm	LC	LC		●			
Tree	Bignoniaceae	*Deplanchea tetraphylla*	golden bouquet tree	LC	LC		●			
Tree	Calophyllaceae	*Calophyllum sil*	alligatorbark	LC	LC		●			
Tree	Clusiaceae	*Garcinia warrenii*	native mangosteen	LC	LC		●			
Tree	Combretaceae	*Terminalia sericocarpa*	sweet damson	LC	LC		●	●		
Tree	Dilleniaceae	*Dillenia alata*	red beech	LC	LC			●		
Tree	Elaeocarpaceae	*Elaeocarpus angustifolius*	blue quandong	LC	LC		●			●
Tree	Escalloniaceae	*Polyosma hirsuta*	hairy polyosma	LC	LC		●			
Tree	Euphorbiaceae	*Aleurites rockinghamensis*	candelnut	LC	LC		●			
Tree	Euphorbiaceae	*Macaranga involucrata* var. *mallotoides*	brown macaranga	LC	LC		●			
Tree	Euphorbiaceae	*Macaranga tanarius*	macaranga	LC	LC		●			
Tree	Euphorbiaceae	*Mallotus paniculatus*		LC	LC		●			
Tree	Euphorbiaceae	*Mallotus philippensis*	red kamala	LC	LC		●			
Tree	Fabaceae	*Cassia fistula*	golden shower	LC	LC		●		●	
Tree	Fabaceae	*Castanosperma australe*	black bean	LC	LC		●			
Tree	Fabaceae	*Cynometra iripa*	wrinkle-pod mangrove	LC	LC	MP		●		
Tree	Fabaceae	*Millettia pinnata*	Indian beech	LC	LC		●			

Form	Family	Species Name	Common Name	NC Act	EPBC Act	Fisheries Act	Vine forest/paperbark	Mangroves	Exotic sp.	EDL
Tree	Lamiaceae	*Premna serratifolia*	coastal premna	LC	LC			●		
Tree	Lauraceae	*Cryptocarya mackinnoniana*		LC	LC		●			
Tree	Lauraceae	*Endiandra acuminata*	brown walnut	LC	LC		●			
Tree	Lauraceae	*Endiandra hypotephra*	northern rose walnut	LC	LC		●			
Tree	Lecythidaceae	*Barringtonia racemosa*	powder-puff tree	LC	LC	MP		●		
Tree	Lythraceae	*Sonneratia caseolaris*	apple mangrove	LC	LC	MP		●		●
Tree	Malvaceae	*Brachychiton acerifolius*	Illawarra flame tree	LC	LC		●			
Tree	Malvaceae	*Commersonia bartramia*	brown kurrajong	LC	LC		●			
Tree	Malvaceae	*Heritiera littoralis*	looking-glass mangrove	LC	LC			●		●
Tree	Malvaceae	*Hibiscus tiliaceus*	cottonwood	LC	LC	MP		●		●
Tree	Malvaceae	*Thespesia populnea*	portia tree	LC	LC	MP		●		
Tree	Meliaceae	*Aglaia sapindina*	boodyarra	LC	LC		●			
Tree	Meliaceae	*Didymocheton gaudichaudianus*	ivory mahogany	LC	LC		●			
Tree	Meliaceae	*Dysoxylum oppositifolium*		LC	LC		●			
Tree	Meliaceae	*Epicharis parasitica*	yellow mahogany	LC	LC		●			
Tree	Meliaceae	*Xylocarpus granatum*	cannonball mangrove	LC	LC	MP		●		
Tree	Mimosaceae	*Acacia celsa*	brown salwood	LC	LC		●	●		●
Tree	Mimosaceae	*Acacia mangium*	forest mangrove wattle	LC	LC		●			
Tree	Moraceae	*Artocarpus altilis*	breadfruit	LC	LC		●		●	
Tree	Moraceae	*Ficus benjamina*	weeping fig	LC	LC		●			
Tree	Moraceae	*Ficus microcarpa*	small-leaved fig	LC	LC		●			
Tree	Moraceae	*Ficus septica*	septic fig	LC	LC		●			
Tree	Moraceae	*Ficus variegata*	variegated fig	LC	LC		●			
Tree	Myrtaceae	*Corymbia torelliana*	cadaghi	LC	LC		●			
Tree	Myrtaceae	*Melaleuca cajuputi*	cajuput	LC	LC		●			
Tree	Myrtaceae	*Melaleuca leucadendra*	weeping tea-tree	LC	LC		●			
Tree	Myrtaceae	*Melaleuca quinquenervia*	broad-leaved tea-tree	LC	LC		●			
Tree	Myrtaceae	*Syzygium angophoroides*	swamp satinash	LC	LC		●			●
Tree	Myrtaceae	*Syzygium hemilampra*	blue satinash	LC	LC		●			
Tree	Myrtaceae	*Syzygium monospermum*	Daintree satinash	LC	LC		●			
Tree	Myrtaceae	*Xanthostemon chrysanthus*	golden penda	LC	LC		●			
Tree	Myrtaceae	*Xanthostemon whitei*	red penda	LC	LC		●			
Tree	Oleaceae	*Chionanthus ramiflorus*	northern olive	LC	LC		●			
Tree	Pandanaceae	*Pandanus solms-laubachii*	swamp pandan	LC	LC			●		
Tree	Phyllanthaceae	*Glochidion philippicum*		LC	LC		●			
Tree	Phyllanthaceae	*Glochidion sumatranum*	umbrella cheese tree	LC	LC		●			
Tree	Podocarpaceae	*Podocarpus grayi*	brown pine	LC	LC		●			
Tree	Proteaceae	*Cardwellia sublimis*	northern silky oak	LC	LC		●			
Tree	Proteaceae	*Darlingia darlingiana*	brown silky oak	LC	LC		●			

Form	Family	Species Name	Common Name	NC Act	EPBC Act	Fisheries Act	Vine forest/paperbark	Mangroves	Exotic sp.	EDL
Tree	Rhamnaceae	*Alphitonia whitei*	white ash	LC	LC		●			
Tree	Rhizophoraceae	*Bruguiera gymnorhiza*	large-leaved orange mangrove	LC	LC	MP		●		●
Tree	Rhizophoraceae	*Bruguiera parviflora*	small-flowered orange mangrove	LC	LC	MP		●		
Tree	Rhizophoraceae	*Bruguiera sexangula*	upriver orange mangrove	LC	LC	MP		●		
Tree	Rhizophoraceae	*Carallia brachiata*	corky-bark	LC	LC	MP	●	●		
Tree	Rhizophoraceae	*Rhizophora stylosa*	spotted mangrove	LC	LC	MP		●		
Tree	Rubiaceae	*Atractocarpus fitzalanii*	native gardenia	LC	LC		●			
Tree	Rubiaceae	*Atractocarpus sessilis*	false gardenia	LC	LC		●			
Tree	Rubiaceae	*Nauclea orientalis*	Leichhardt tree	LC	LC		●			
Tree	Rubiaceae	*Timonius timon* var. *timon*	timonius	LC	LC		●			
Tree	Rutaceae	*Melicope elleryana*	pink-flowered doughwood	LC	LC		●			
Tree	Sapindaceae	*Lepiderema sericolignis*	silkwood	LC	LC		●			
Tree	Sapindaceae	*Litchi chinensis*	lychee	LC	LC		●		●	
Tree	Sapindaceae	*Mischocarpus exangulatus*	red bell	LC	LC		●			
Tree	Sapindaceae	*Rhysotoechia robertsonii*	Robert's tuckeroo	LC	LC		●			
Tree	Sapindaceae	*Toechima erythrocarpum*	pink tamarind	LC	LC		●			
Vine	Apocynaceae	*Allamanda cathartica*	yellow allamanda	LC	LC		●		●	
Vine	Apocynaceae	*Alyxia spicata*	chainfruit	LC	LC		●			
Vine	Apocynaceae	*Dischidia nummularia*	button-orchid	LC	LC			●		
Vine	Apocynaceae	*Gymnanthera oblonga*	harpoon bud	LC	LC		●			
Vine	Apocynaceae	*Hoya australis*	slender wax-vine	LC	LC		●			
Vine	Apocynaceae	*Hoya pottsii*	claret hoya	LC	LC			●		
Vine	Apocynaceae	*Ichnocarpus frutescens*	blackvine	LC	LC		●			
Vine	Apocynaceae	*Leichhardtia* sp.		LC	LC		●			
Vine	Apocynaceae	*Melodinus acutifolius*		LC	LC		●			
Vine	Araceae	*Epipremnum aureum*	money plant	LC	LC			●	●	
Vine	Araceae	*Epipremnum pinnatum*	centipede tongavine	LC	LC		●			
Vine	Araceae	*Philodendron* sp.		LC	LC		●		●	
Vine	Aristolochiaceae	*Aristolochia deltantha*		LC	LC					
Vine	Asparagaceae	*Eustrephus latifolius*	wombat-berry	LC	LC		●			
Vine	Aspleniaceae	*Asplenium nidus*	bird's-nest fern	LC	LC		●			
Vine	Asteraceae	*Calyptocarpus vialis*	creeping cinderella weed	LC	LC		●		●	
Vine	Asteraceae	*Emilia sonchifolia*	emilia	LC	LC		●		●	
Vine	Celastraceae	*Salacia scandens*		LC	LC		●			
Vine	Connaraceae	*Connarus conchocarpus*	shell vine	LC	LC		●			
Vine	Convolvulaceae	*Decalobanthus peltatus*	big-leaf merremia	LC	LC		●			
Vine	Dilleniaceae	*Hibbertia scandens*	snake vine	LC	LC		●			
Vine	Dilleniaceae	*Tetracera nordtiana*	small-leaved fire vine	LC	LC		●			
Vine	Dioscoreaceae	*Dioscorea transversa*	pencil yam	LC	LC		●			

Form	Family	Species Name	Common Name	NC Act	EPBC Act	Fisheries Act	Vine forest/paperbark	Mangroves	Exotic sp.	EDL
Vine	Fabaceae	*Austrosteenisia blackii*	blood vine	LC	LC		●			
Vine	Fabaceae	*Calopogonium mucunoides*	calopo	LC	LC		●		●	
Vine	Fabaceae	*Centrosema molle*	centrosema	LC	LC				●	
Vine	Fabaceae	*Dalbergia candenatensis*		LC	LC		●			
Vine	Fabaceae	*Derris trifoliata*	derris	LC	LC		●			
Vine	Fabaceae	*Mucuna gigantea*	burney bean	LC	LC		●			
Vine	Flagellariaceae	*Flagellaria indica*	whipstick-vine	LC	LC		●			
Vine	Lamiaceae	*Hyptis capitata*	false ironwort	LC	LC			●	●	
Vine	Menispermaceae	*Hypserpa laurina*		LC	LC		●			
Vine	Moraceae	*Malaisia scandens*	burny vine	LC	LC		●			
Vine	Pandanaceae	*Freycinetia excelsa*		LC	LC		●			
Vine	Pandanaceae	*Freycinetia scandens*		LC	LC		●			
Vine	Passifloraceae	*Adenia heterophylla*	native passionfruit	LC	LC		●			
Vine	Piperaceae	*Piper caninum*	common piper	LC	LC		●			
Vine	Piperaceae	*Piper hederaceum* var. *hederaceum*	native pepper vine	LC	LC		●			
Vine	Smilacaceae	*Smilax australis*	lawyer vine	LC	LC		●			
Vine	Vitaceae	*Cayratia japonica*	bushkiller	LC	LC		●			
Vine	Vitaceae	*Cayratia saponaria*		LC	LC		●			
Vine	Vitaceae	*Cissus hastata*		LC	LC		●			
Vine	Vitaceae	*Cissus penninervis*	native grape	LC	LC		●			
TOTALS			**250**				**211**	**43**	**42**	**9**

Appendix K

An Environmental Management Plan, dated July 2025, prepared by 4 Elements



Environmental Management Plan

Daintree River Ferry Crossing

Doc # R2025-342

4 elements

Environmental Management Plan

Daintree River Ferry Crossing

Project Superintendent

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1.0 Introduction and purpose

This Environmental Management Plan (EMP) has been prepared for Douglas Shire Council (DSC) who are undertaking work to increase the passenger vehicle capacity of the existing Daintree River Ferry terminal. The project site is located near to intensive horticultural industries, tourist and recreational infrastructure and conservation reserves (**Figure 1**). As part of the concept design proposal, vegetation clearing is required to establish the following footprint. Communication with Douglas Shire Council (Robert Latham, pers. comm. 17 July 2024) provided further detail on the specific proposed clearing and related works, which are:

Southern side of Daintree River

- Widening of the current alignment of Cape Tribulation Road upon approach of pull-off to Solar Whisper Wildlife Cruises by one (1) lane to the northwest (**Figure 2**, Part A).
- Widening of the current alignment of Cape Tribulation Road after the pull-off to Solar Whisper Wildlife Cruises by one (1) lane to the northwest to account for installation of a ticketing office/checkpoint (**Figure 2**, Part B).
- Installation of additional four to six (4-6) lanes to the centre of the current alignment of Cape Tribulation Road upon approach to the ferry to allow for separation of visitor boarding and exiting lanes from locals/permit-holders boarding and exiting lanes (**Figure 2**, Part C).
- Dredging area to address new future wider vessel and partitioning of a storage area for dredged material including for testing and reallocation. The storage area is designated within a set-down area previously cleared to the southeast of the alignment (**Figure 2**, Part D). The ferry is moved to site on the river with a long-reach excavator and semi-trailer on the deck area. The excavator reaches collects material off the front or rear of the vessel, and places it on the back of the semi-trailer. When this is full, the ferry drives back to the shore and the truck departs to the allocated bund site and offloads material. This process continues until the required depths have been reached, as per survey. The material is then stored in the bund, samples taken for laboratory testing, and once laboratory test results have returned, DSC decide as to when and which beach the material is driven to for beach replenishment.

Northern side of Daintree River

- Widening of Cape Tribulation Road to the northwest of the current alignment from two (2) lanes to four (4) lanes up until the junction with Forest Creek Road (**Figure 2**, Part E).
- Widening of Cape Tribulation Road to the southwest of the current alignment from two (2) lanes to four (4) lanes after the junction with Forest Creek Road (**Figure 2**, Part F).

The above works comprise the Project. This EMP describes the environmental management system and controls that shall be established and implemented by DSC and its contractors to ensure that construction works undertaken are conducted in accordance with contract requirements, permits and licensing requirements and any additional documented requirements. This includes following AS/NZS ISO 14001:2015 and acting in accordance with the Queensland Government's own guidelines on developing EMPs (Queensland Government, 2023).

The successful contractor assigned to undertake the works outlined above, is to compile a Construction Environmental Management Plan (CEMP) that uses this overarching EMP as a guide, and provides project and site-specific context, actions, management, and monitoring procedures.

This EMP will refer to State Development Assessment Provisions (SDAP) CODE 22 – Environmentally relevant activities which have been brought forward as Item 3 of a State Assessment and Referral Agency (SARA) pre-lodgement advice document (reference 2111-25845 SPL, 7 February 2025) for an environmentally-relevant activity (ERA) and for Environmental Authority (EA) requirements. The Project will trigger referral for an MoU for an ERA dredging 10,000-100,000 t/yr.

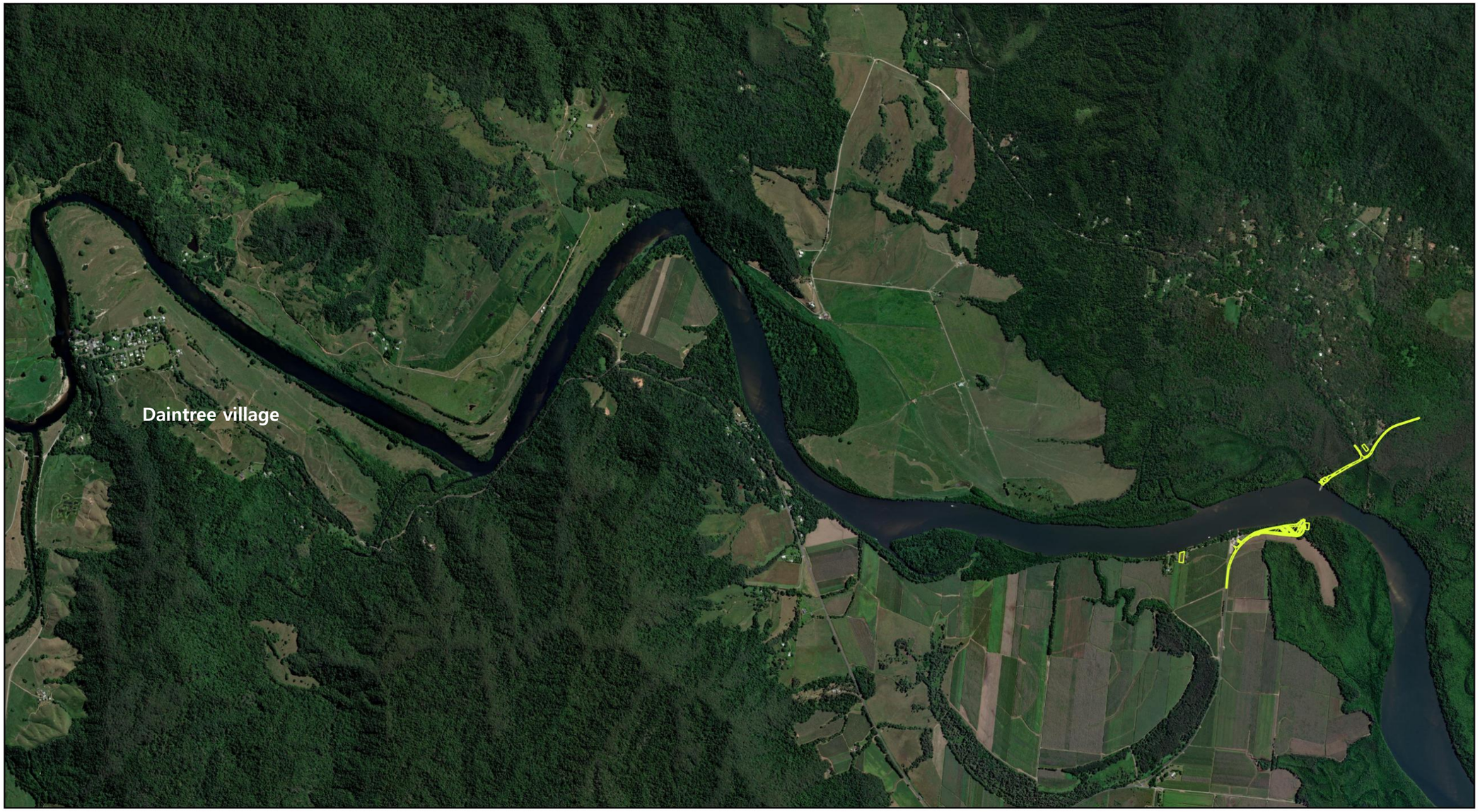


Figure 1. Location of the project site

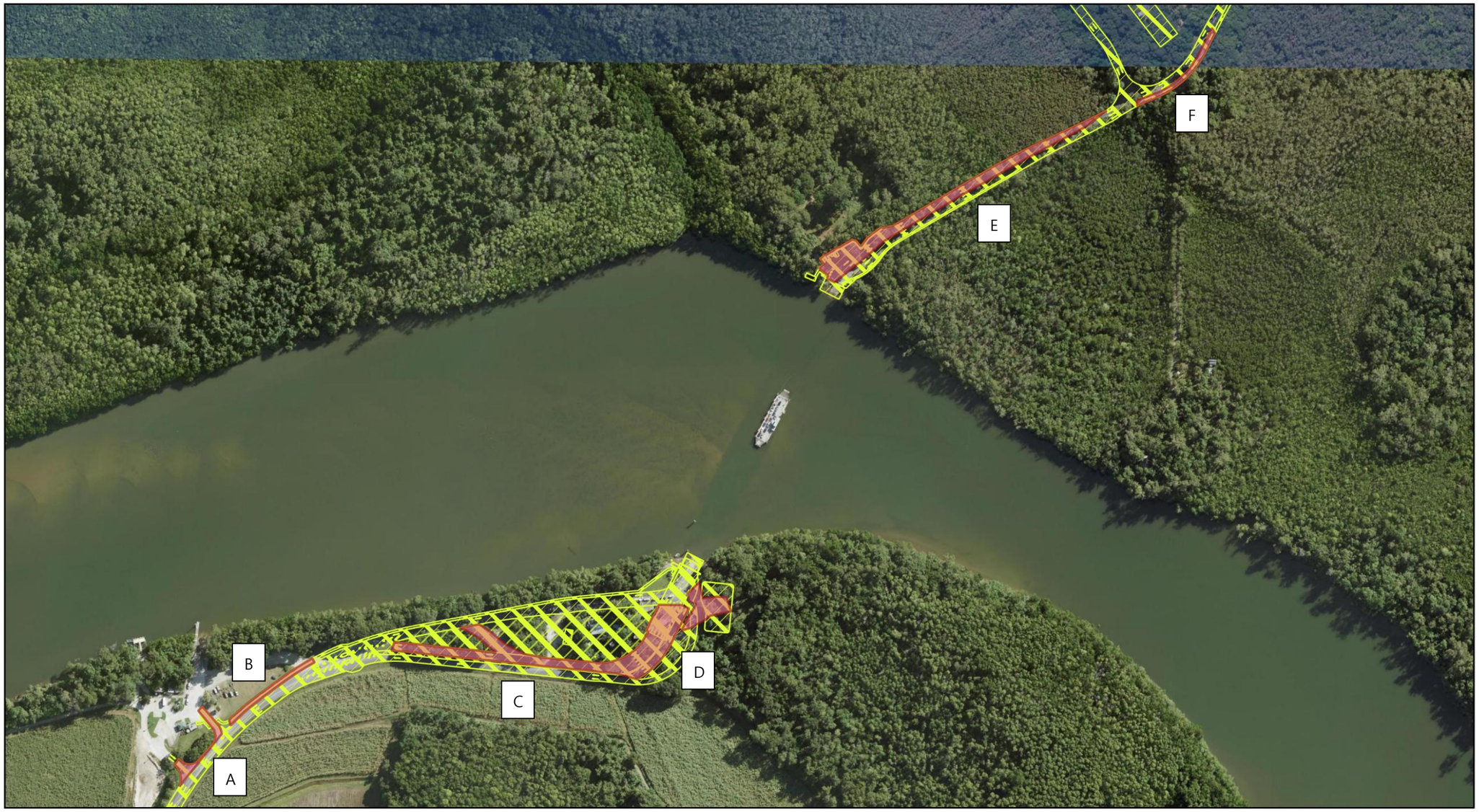


Figure 2. Map of the project alignment within the project site

1.1 Amendments and authorisation

This EMP shall be approved by the Project Manager and their Line Manager. This EMP and other related documents will be reviewed annually, or as a result of:

- Changes to procedures or processes
- Changes to key personnel or resources
- Changes in legal and other obligations
- Findings from an audit or inspection
- Findings from a non-conformance or significant incident or near miss
- Significant changes to site conditions and/or work methods

Reviews shall be undertaken in consultation with key stakeholders to ensure all work locations and impacts are considered. A record of the date and comments relating to any revisions of this document shall be included in the revisions table.

1.2 Communication of this Plan

The Project Manager is accountable for ensuring that:

- Reference to the management plans is communicated at the induction
- Site communication forums will also be used to communicate specific requirements of the plans
- Any changes made to the EMP are communicated to all affected persons on the site

Prior to construction, personnel holding key responsibilities and accountabilities under this plan shall sign **Appendix C** as acknowledgement of having read and understood responsibilities and accountabilities.

1.3 Supporting management documents

The following plans/processes have been developed to support the delivery of this project and shall be read in conjunction with this EMP:

- Vehicle and machinery clean-down procedures manual (Biosecurity Queensland, 2019)
- Australian Government machinery cleaning guides and checklists (Australian Government, 2024)
- International Erosion Control Association (IECA Australasia) Best Practise Erosion and Sediment Control (BPESC) document (available online at: https://www.austieca.com.au/publications/best-practice-erosion-and-sediment-control-bpesc-document)

- Aboriginal Cultural Heritage Act 2003 – Duty of Care Guidelines (Queensland Government, 2024)

2.0 Project context

Most works for this project will be within the extent of existing developed areas at the site, however the extent of works required are of a 'whole-of-site' scale, and there is a possibility that some works may require relocation to comply with current codes. A full engineering layout is provided in **Appendix D** demonstrating the proposed works footprint.

The site is accessed via a sealed road, Cape Tribulation Road, Queensland. Topography of the area is relatively flat at 5 m above sea-level (ASL) but generally increases in altitude to the north of the Project footprint (between 5 – 30 ASL). The Daintree River itself is a Tidal waterway for waterway barrier works with High-level freshwater tributaries feeding into it. As such it is a defined watercourse (MSES regulated vegetation and Major-rated waterway for waterway barrier works). There has previously been a car ferry across the Daintree River at this point however, and no known barrier works have been installed.

This EMP will be used to assist in the delivery of acceptable environmental management outcomes for the construction phase of the Project, set out in a Construction Environment Management Plan (CEMP) and subject to a Staging Plan set out in a Scope of Works by the project team.

The objectives of this EMP are to:

- Establish performance criteria for relevant concerns
- Demonstrate compliance with relevant legislative requirements
- Provide evidence of prevention, minimisation, and mitigation measures for potential adverse impacts
- Provide details of the implementation responsibilities
- Set achievable reporting requirements an auditing responsibility for meeting performance objectives
- Provide a plan for monitoring, assessing and controlling potential impacts

3.0 Objectives, targets, and opportunities

Key construction Environmental Management leading (**Table 1**) and lagging (**Table 2**) objectives and indicators for this project are as follows:

Table 1. Leading indicators

Objective	Target	Indicator	Timeframe
Compliance with the Project EMP	100% compliance	Environmental audit score percentage	Project duration
Completion of inspections and reports with scheduled time frame as per Principal Administrator	100% compliance	% of inspections conducted versus those scheduled	Weekly, fortnightly or monthly (at the discretion of the Project Superintendent and conducted with the Contractor's Representative) – see **Section 5.0**
'Zero' spills to water of oil or other hazardous materials	0 per month	% of observations conducted versus targeted number	Weekly, fortnightly or monthly (at the discretion of the Project Superintendent and conducted with the Contractor's Representative) – see **Section 5.0**
No establishment of new weeds (exotic plants)	0 per month	% of observations conducted versus targeted number	Weekly, fortnightly or monthly (at the discretion of the Project Superintendent and conducted with the Contractor's Representative) – see **Section 5.0**

Table 2. Lagging indicators

Objective	Target	Indicator	Timeframe
No environmental incidents	Zero	No. of incidents during life of the project	Ongoing
Number of actions taken by regulators and/or Principal	Zero	No. of actions during life of the project	At all times
Area of land cleared or disturbed without authorisation	Zero ha	Area of land cleared during the life of the project	At all times

Objective	Target	Indicator	Timeframe
Number of unauthorised discharges	Zero	Number of unauthorised discharges during the life of the project	At all times
Damage to heritage items or places without relevant approvals	Zero	Number of heritage items or places damaged during the life of the project	Ongoing
% of waste reused or recycled	50% of waste generated is recycled [note waste types excluded from calculation must be defined]	Project Waste register maintained and tracked. Indicates greater than 50% of waste recycled	12 months
		50% concrete waste by weight reused or recycled	
Eliminate all spills and environmental harm	Zero Environmental Harm	No. of incidents during life of the project	Project duration
Minimise environmental hazards by conducting weekly inspection	Aim for 100% hazard close out at end of each week	% of identified hazards which have been closed-out at the end of each week	Weekly

This EMP provides the methodology and resources for achieving these objectives and targets as outlined in the tables above.

4.0 Legal and other obligations

4.1 General environmental obligations and duties

4.1.1 General environmental duty

All persons have a general environmental duty under the *Environmental Protection Act 1994* (EP Act) to not carry out any activity that causes, or is likely to cause, environmental harm unless the person has an authority to do so or has taken all reasonable and practicable measures to prevent or minimise the harm.

4.1.2 Duty to notify

If you see or cause an incident that results in or threatens serious or material environmental harm, it is your duty to report it quickly. If you cause an incident, you must take action to prevent or minimise the harm and report it, in some cases within 24 hours of becoming aware.

4.2 Environmental licences, permits and approvals

All required licences, permits and project approvals will be provided by the Queensland and Australian Governments. The following permits and approvals are required for the Project:

- Given the potential for native wildlife to utilise the site, a pre-clearance survey should be completed by a suitably qualified person (e.g., fauna spotter-catcher, ecologist) as soon as possible prior to clearing to identify if any animal breeding places are present, and if so, whether a low or high-risk Species Management Plan (SMP) is required.
- State Development Assessment Provisions (SDAP) CODE 22 – Environmentally relevant activities and Environmental Authority (EA) requirements. The Project will trigger referral for an MoU for an ERA dredging 10,000-100,000 t/yr.

4.3 Infringement, improvement and prohibition notices

The Project Manager, or delegate, will ensure any infringement, improvement or prohibition notice issued by an administering authority is recorded as a non-conformance or incident in the Incident Register (**Appendix A**), and appropriate actions taken in a timely manner. A copy of the infringement, improvement or prohibition will be forwarded to the Principal.

- The Project Manager (or delegate) will notify DSC immediately after being advised of meetings with, inspections or visits from representatives of any regulatory authority.
- The Project Manager will notify via email the General Manager and Operations Manager when the infringement, improvement or prohibitions notice has been closed out.

- The Project Manager (or delegate) will immediately notify DSC and the Department of Environment, Tourism, Science and Innovation (DETSI) of any incident involving Serious or Material Environmental Harm (as defined in the EP Act).

4.4 Relevant legislation

Table 3 outlines legislation relevant to construction and the project.

Table 3. Relevant legislation

Aspect	Legislative and Other Requirements
Construction and General works	• Queensland *Environmental Protection Act 1994* • Queensland *Environmental Protection Regulation 2019* • Queensland *Workplace Health and Safety Act 2011* • Queensland *Workplace Health and Safety Regulation 2011* • Queensland *Aboriginal Cultural Heritage Act 2003*
Noise and Vibration	• Queensland *Environmental Protection (Noise) Policy 2019* • Queensland *Workplace Health and Safety Act 2011* • Australian Standard (AS) *1055.1 & 1055.2 – Acoustics – Description and measurement of environmental noise* • Australian Standard (AS) *2436: Guide to noise control on construction, maintenance and demolition sites*
Air Quality	• Queensland *Environmental Protection (Air) Policy 2019* • Commonwealth *National Health and Medical Research Council Guidelines 1985* • *Draft National Environmental Protection Measures and Impact* • Commonwealth *Statement for Ambient Air Quality 1997* • Australian/New Zealand Standard *3580.1.1:2007 – Methods for sampling and analysis of ambient air – Part 1.1: Guide to siting air monitoring equipment*
Water Quality	• Commonwealth *Great Barrier Reef Marine Park Act 1975* • Commonwealth *Great Barrier Reef Marine Park Zoning Plan and relevant policies (GBRMPA)* • Queensland *Marine Parks Act 2004*

Aspect	Legislative and Other Requirements
	• *Australian and New Zealand Water Quality Guidelines, ANZG 2018* • Queensland *Aboriginal Cultural Heritage Act 2003* • Queensland *Water Act 2000*
Erosion and Sedimentation Control	• Queensland *Soil Erosion and Sediment Control, Engineering Guidelines for Queensland Construction Sites – IEAust 1996* • Queensland *Aboriginal Cultural Heritage Act 2003*
Contaminated Land	• Queensland *Environmental Protection Act 1994* • Queensland *Aboriginal Cultural Heritage Act 2003*
Storage and Handling of Dangerous Goods	• Queensland *Environmental Protection Act 1994* • Queensland *Environmental Protection Regulation 2019* • Queensland *Workplace Health and Safety Act 2011* • Australian Standard *1940 – The Storage and Handling of Flammable and Combustible Liquids*
Transport of Dangerous Goods	• *Australian Code for Transport of Dangerous Goods by Road and Rail*
Waste Management	• Queensland *Waste Reduction and Recycling Act 2011* • Queensland *Environmental Protection (Waste Management) Regulation 2000* • Queensland *Transport Operations (Marine Pollution) Act 1995* • Queensland *Transport Operations (Marine Safety) Act 1994 (Marine Safety Queensland)* • Queensland *Aboriginal Cultural Heritage Act 2003*
Flora and Fauna	• Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* • Queensland *Fisheries Act 1994* • Queensland *Nature Conservation Act 1992* • Queensland *Nature Conservation (Plants) Regulation 2020* • Queensland *Nature Conservation (Animals) Regulation 2020* • Queensland *Vegetation Management Act 1999* • Queensland *Environmental Protection Act 1994* • Queensland *Biosecurity Act 2014* • Australian Standard *4970 – Protection of trees on development sites*
First Nations Cultural Heritage and Queensland Heritage	• Queensland *Aboriginal Cultural Heritage Act 2003*

Aspect	Legislative and Other Requirements
	• Queensland *Heritage Act 1992* • Queensland *Duty of Care Guidelines (Department of Aboriginal and Torres Strait Islander Partnerships)*
Land Use	• Queensland *Planning Act 2016* • Queensland *Biosecurity Act 2014* • Queensland *Public Land and Council Assets Local Law 2014* • Queensland *Natural Assets Local Law 2003*

5.0 Roles and responsibilities

Authorities and responsibilities for construction activities are defined and communicated in this EMP. Key Environmental responsibilities and authorities include:

Principal:

- The client – DSC
- Administration of the Queensland *Nature Conservation Act 1992*

Project Superintendent, or their Representative (the Department):

- Employed by the client
- Superintendent may be a DSC Project Officer, or may be a representative appointed and authorised at the discretion of the Principal
- Representative of the client for the purposes of the life of the project
- Approvals relating to the project
- Contract administration incl. variations, show-cause noticing, invoicing etc.
- Weekly-monthly inspections of the project at their discretion

Contractor's Representative (the Contractor):

- Works with the Project Superintendent to approve and undertake site inspections
- Ensure that project environmental responsibilities and authorities are defined and communicated
- Provide adequate resources to meet environmental objectives
- Ensure that the EMP is effectively implemented and maintained
- Act as the project environmental representative
- Report to senior management on the performance of the system and environmental breaches
- Take action to investigate environmental non-conformances and incidents and establish corrective actions
- Report environmental incidents to the Principal / Project Superintendent as required
- Attend weekly-monthly inspections of the project at the discretion of the Project Superintendent
- Carefully select suppliers and subcontractors based upon their ability to meet stated requirements
- Ensure suppliers and subcontractors comply with requirements
- Ensure that purchase orders and agreements include environmental requirements as necessary
- Always consider the most sustainable and "minimal footprint" solution when reviewing methods, material selections and other solutions

Site Manager (the Contractor):

- Implement the EMP on the project site
- Report to Contractor's Representative on environmental issues, breaches, etc.
- Ensure that site personnel are aware of their environmental obligations
- Report all environmental incidents

- Take action to resolve non-conformances and incidents
- Ensure that site environmental controls are effective and maintained
- Supervise site construction personnel and ensure that they meet environmental and other requirements
- Train personnel through toolbox talks etc on best environmental practice

Engineers (the Contractor):

- Assist the Project Manager in ensuring that project environmental responsibilities and authorities are defined and communicated
- Assist in providing adequate resources to meet environmental objectives
- Support the EMP implementation and maintenance
- Report to the Project Manager on the performance of the system and environmental breaches
- Assist in investigation of environmental non-conformances and incidents and establish corrective actions
- Ensure suppliers and subcontractors comply with requirements
- Report environmental incidents to the Site Manager to report to the Project Superintendent and Principal
- Carefully select suppliers and subcontractors based upon their ability to meet stated requirements
- Ensure that purchase orders and agreements include environmental requirements as necessary
- Always consider the most sustainable and "minimal footprint" solution when reviewing methods, material selections and other solutions
- Ensure training is carried out for supervisors and personnel through toolbox talks etc. on best environmental practice

Environmental Advisor and Safety Representative (the Contractor):

- To create in conjunction with the Site Manager an exemplary Health Safety Environment (HSE) culture and implement the company's HSE management system
- Demonstrate through their actions and behaviour that the environment is a core value
- Hold accountable their staff for the fulfilment of their environmental responsibilities
- Provide coaching and mentoring for behavioural change
- Work closely with All Personnel to assist them in understanding their environmental responsibilities and the procedures they need to comply with
- Monitor environmental controls on site
- Report performance
- Collect and analyse data to review environmental performance
- Assist in the development and review of work method statements and SWMS
- Immediately stop any 'At Risk Behaviour' identified during daily work activities

Subcontractors (the Contractor):

- Comply with all legal and contractual requirements

- Comply with site environmental requirements
- Comply with management / supervisory directions
- Participate in induction and training as directed
- Report all incidents
- Comply with any approved SWMS, Risk Assessments and Management Plans

All Personnel

- Comply with the relevant Acts, Regulations and Standards
- Comply with the company or departmental environmental policy and procedures
- Promptly report to management on any non-conformances, environmental incidents and/or breaches of the system
- Undergo induction and training in environmental awareness as directed by management
- Report all incidents
- Act in an environmentally responsible manner
- Be aware of general environmental duty and duty to notify as per the Environmental Protection Act 1994

5.1 Key contacts

Table 4 below lists key contacts for the Project.

Table 4 Principal contacts

Name	Role	Affiliation	Contact phone number	Contact email address
First point of contact				
Robert Latham	Project Superintendent	Douglas Shire Council	07 4099 9542	robert.latham@douglas.qld.gov.au
Secondary point of contact				
Wayne Kristalyn	Infrastructure Planning and Delivery Manager	Douglas Shire Council	07 4099 9543	wayne.kristalyn@douglas.qld.gov.au

6.0 Communication and consultation

6.1 Internal communications

The site will use the methods detailed below to communicate to employees, subcontractors, and visitor's information in relation to this management plan, applicable legislative requirements, environmental objectives and performance, and issues.

6.1.1 Inductions

All personnel, subcontractors and visitors will undergo a project induction, facilitated by the Site Manager before commencing work on-site. The induction addresses general and project specific environmental issues, including:

- Environmental policy
- How the EMP will be implemented on-site
- High-risk environmental activities on the Project and their controls
- What to do in the event of an environmental incident

An assessment will be conducted upon completion of the induction. Records of these induction shall be managed by the Contractor.

6.1.2 Environmental alerts and bulletins

Incident alerts will be used to communicate learnings and actions required to prevent the occurrence of similar or recordable incidents. Environmental bulletins developed by the site team and approved by Environmental Management will be used to communicate environmental information to the workplace.

6.1.3 Site meetings

The following meetings will be held on site to monitor implementation of the management system, review performance and communicate with workers regarding site health, safety and environment:

- Site project meeting
- Pre-start meetings
- Toolbox talks

Meeting agenda and minutes will be recorded, maintained, and be made available when required.

6.2 External communications

External communications with external parties will be managed by the Principal. All community notifications, enquiries and complaints will be managed by the Contractor. Any outside contact or enquiries directed to the contractor regarding the project, will also be forwarded to the Project Superintendent to communicate with the Principal. Contractors will also maintain direct contact with the relevant authorities during the life cycle of the project.

7.0 Hazard identification and risk control

7.1 Hierarchy of control

The hierarchy of control (Error! Reference source not found.**4**) will be applied to controlling environmental risks and environmental aspects within the project. This hierarchy recognises that the best controls act on the environment, not on the people in it.

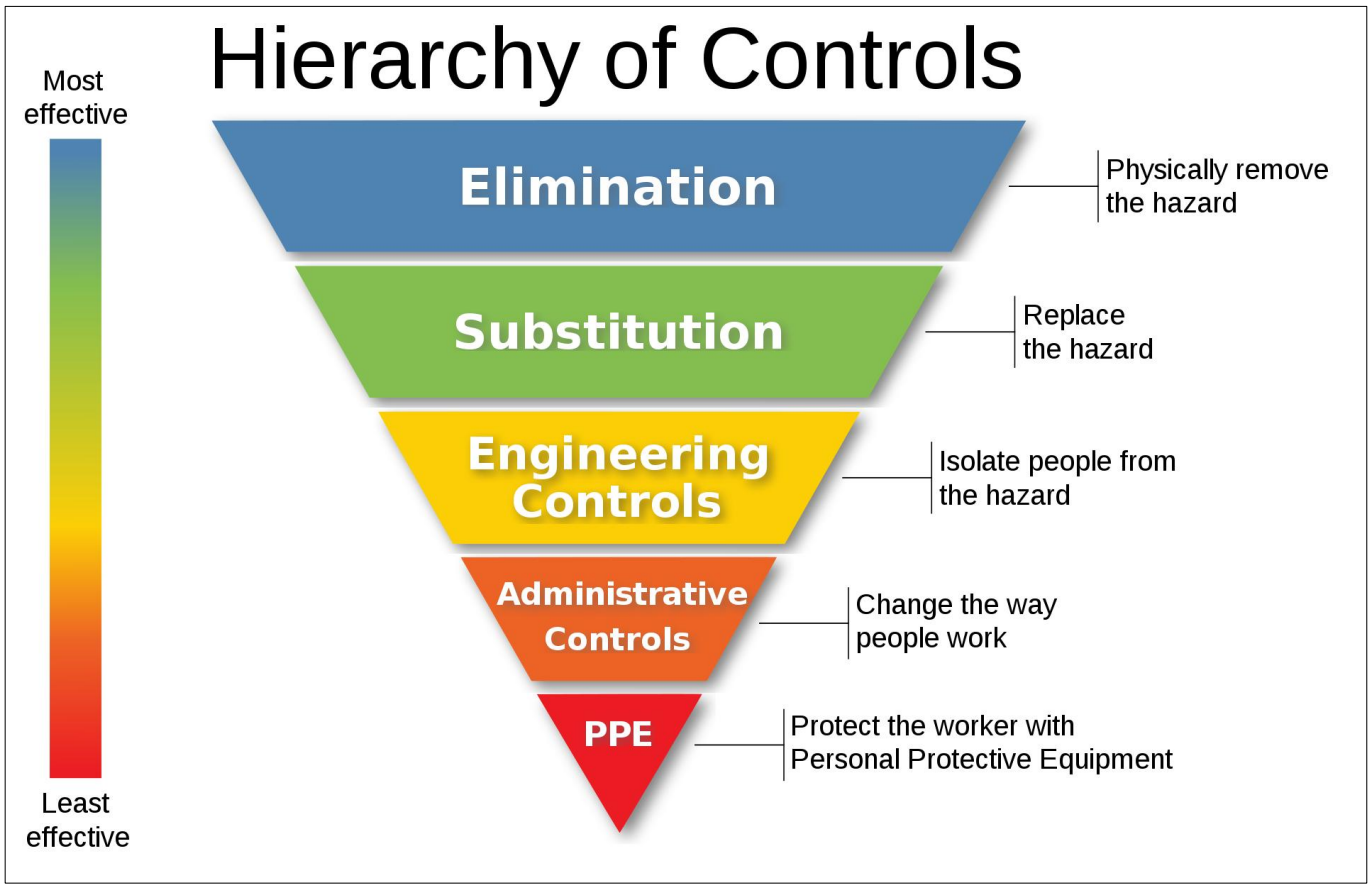


Figure 3. Hierarchy of control

7.2 Site environmental risk analysis

This risk assessment process shall identify significant environmental aspects from the level of risk identified and from legal or other requirements applicable to the environmental aspects. Significant environmental aspects identified in the risk assessment shall then be considered in developing any other environmental system documents including this EMP, environmental objectives, Safe Work Method Statements (SWMS) and Environmental Work Method Statements, as required.

7.2.1 Risk identification assessment

Table 5 on the following page is a risk assessment matrix to identify risks and environmental aspects that may arise as a result of construction activities. To conduct a risk assessment for an environmental hazard or aspect, follow the steps below:

1. Consult with relevant workers the task that presents as a hazard, any associated hazards, risks and controls
2. Name column 1, 'Hazards', and then list the hazards identified
3. Name column 2 'Risks', and then list the risks identified
4. For each hazard and risk, work through the hierarchy of control as per the below (anyone, or a combination of controls can be used) and choose a control measure to reduce the risk. Add this to column 3 which will be named 'Control Measure'
5. Assess the risk using the risk matrix (Table 5) and then add this to column 4 which will be named 'Risk Rating'.



Table 5. Risk Assessment Matrix

Step 1: Determine Likelihood: What is the possibility that the effect will occur?			**Step 2: Determine Consequence:** What will be the expected effect?	
	Criteria	**Description**	**Level of Effect:**	**Example of each level:**
Almost certain	Expected in most circumstances.	The effect is a common result.	**Insignificant/ Acceptable**	No effect – or so minor that effect is acceptable.
Likely	Will probably occur in most circumstances.	The effect is known to have occurred previously.	**Minor**	First Aid treatment only.
Possible	Might occur at some time.	The effect could occur	**Moderate**	Serious injuries, medium business interruption, medium environmental impact.
Unlikely	Could occur at some time.	The effect is not likely to occur	**Major**	Extensive injuries/Death; significant business interruption, major loss of credibility, Environmental harm, prosecution.
Rare	May occur only in exceptional circumstances.	The effect is practically impossible.	**Catastrophic**	Multiple Permanent Total Disability injuries; multiple deaths. Business failure, substantial environmental harm, prosecution/imprisonment.

Step 3: Determine the risk score:			**Consequence**			**Step 4: Assess Risk:** (Note – Risk scores have no absolute value and should only be used for comparison and to engender discussion.)	
Likelihood	**Insignificant**	**Minor**	**Moderate**	**Major**	**Catastrophic**		
Almost certain	**3 High**	**3 High**	**4 Acute**	**4 Acute**	**4 Acute**	**Score**	**Action**
Likely	**2 Mod.**	**3 High**	**3 High**	**4 Acute**	**4 Acute**	**4A: Acute**	***DO NOT PROCEED*** Requires immediate attention. Introduce further high-level controls to lower the risk level. Re-assess before proceeding.
Possible	**1 Low**	**2 Mod.**	**3 High**	**4 Acute**	**4 Acute**	**3H: High**	*Review before commencing work.* Introduce new controls and/or maintain high-level controls to lower the risk level. Monitor frequently to ensure control measures are working.
Unlikely	**1 Low**	**1 Low**	**2 Mod.**	**3 High**	**4 Acute**	**2M: Mod.**	*Maintain control measures.* Proceed with work. Monitor and review regularly, and if any equipment/people/materials/work processes or procedures change.
Rare	**1 Low**	**1 Low**	**2 Mod.**	**3 High**	**3 High**	**1L: Low**	*Record and monitor.* Proceed with work. Review regularly, and if any equipment/people/materials/work processes or procedures change.

8.0 Management plan outline

Table 6 below details an outline of all activities that may occur from the construction phase of the proposed project. Related to these activities are environmental impacts and the control procedures that may be followed to rectify and/or prevent environmental issues on the site during construction.

Table 6. Construction activities and relevant control elements

Activity	Impact	Control Elements
Vehicles/ Plant operations	Air Quality Public Nuisance Biodiversity	9.1: Air Quality (Vehicles/Plant) 9.2: Chemical, Fuels and Contaminants (Vehicles/Plant) 9.4: Cultural Heritage (Ground disturbing activity) 9.8: Noise (Vehicles/Plant; Work Time) 9.9: Pest Management (Vehicles/Plant; Temporary Wash Down Bays) 9.1: Vibration (Vehicle/Plant; Work Time)
Refuelling	Land Contamination Water Contamination	9.2: Chemicals, Fuels and Contaminants (Refuelling)
Chemical Storage	Land Contamination Water Contamination	9.2: Chemicals, Fuels and Contaminants (Storage)
Stockpiling	Air Quality Water Contamination Land Degradation Biodiversity	9.1: Air Quality (Stockpiling) 9.3: Contaminated Soils (Stockpiling) 9.4: Cultural Heritage (Ground disturbing activity) 9.5: Erosion and Sediment Control (Stockpiling) 9.9: Pest Management (Materials)
Vegetation Clearing	Air Quality Water Contamination Land Degradation Heritage values Biodiversity	9.1: Air Quality (Vegetation) 9.4: Cultural Heritage (Ground disturbing activity) 9.5: Erosion and Sediment Control (Clearing) 9.6: Fauna (General, Clearing) 9.7: Flora (Clearing)
Earthworks	Air Quality Land Contamination Water Contamination Heritage values Land Degradation Biodiversity	9.1: Air Quality (Earthworks) 9.2: Chemical, Fuels and Contaminants (Works adjacent to sewer/water pipes) 9.3: Contaminated Soils (Earthworks) 9.4: Cultural Heritage (Ground disturbing activity) 9.5: Erosion and Sediment Control (Earthwork, Roadways, Drains) 9.6: Fauna (General, Earthwork) 9.9: Pest Management (Materials) 9.10: Potential and Actual Acid Sulphate Soil (PASS/ASS) 9.13: Water Quality

Activity	Impact	Control Elements
Stencilling/Line/ Colour Work	Water Contamination	9.4: Cultural Heritage (Water disturbing activity) 9.13: Water Quality (Stencilling/Colour Work/Line Marking)
Concrete Work	Water Contamination	9.4: Cultural Heritage (Water disturbing activity) 9.13: Water Quality (Concrete Works)
Asphalt Works	Water Contamination	9.4: Cultural Heritage (Water disturbing activity) 9.13: Water Quality (Asphalt)
Waste Management	Air Quality Resource Recovery	9.1: Air Quality (Burning) 9.3: Contaminated Soils (Transport and Disposal) 9.4: Cultural Heritage (Water/Ground disturbing activity) 9.7: Flora (Remediation) 9.12: Waste (General Waste, Regulated Waste)
Remediation	Air Quality Land Contamination Water Contamination Biodiversity	9.1: Air Quality (Remediation) 9.2: Chemical, Fuels and Contaminants (Remediation) 9.3: Contaminated Soil (Remediation) 9.4: Cultural Heritage (Water/Ground disturbing activity) 9.5: Erosion and Sediment Control (Landscaping) 9.6: Fauna (Remediation) 9.7: Flora (Remediation) 9.12: Waste (Remediation)

9.0 Construction management

The following sections relate to environmental aspects that may be impacted by construction activities and outlines actions and controls to avoid or mitigate significant impacts.

9.1 Air quality

The management of air quality shall be in accordance with all Principal supplied documentation and the relevant Australian standards and legislation.

Table 7 Management for contaminants to air

Objective	Take all reasonable and practicable measures to ensure the activity does not result in air quality impacts that cause environmental nuisance or harm.	
Legislation and standards	*Environment Protection Act 1994* *Environmental Protection (Air) Policy 2019 (Qld)* *National Health and Medical Research Council Guidelines 1985 (Cwth)* *Draft National Environmental Protection Measures and Impact* *Statement for Ambient Air Quality 1997 (Cwth)* *AS/NZS 3580.1.1:2007 – Methods for sampling and analysis of ambient air – Part 1.1: Guide to siting air monitoring equipment*	
Phase	**Requirement**	**Actions**
Induction	All Staff	▸ Be aware of worksite location in proximity to other business and or residences. ▸ Responsibilities regarding obligations under Duty of Care and Duty to Notify. ▸ Personnel to complete all site inductions applicable before site entry.
Pre-Work	Prior to Work	▸ All vehicles and plant equipment shall be maintained to keep emissions within the limits set by Australian Design Rules. ▸ Equipment fitted with dust collection/suppression devices, where possible.
Construction	Vegetation/ Clearing	▸ Minimise disturbance to grassed areas as much as possible. ▸ Lightly water any exposed ground areas pre and post a day's work to minimise dust particle disturbance.
	Earthworks	▸ Avoid works (e.g., stripping, excavation etc.) during dry and windy conditions. ▸ Maintain clean access ways to and from the work site. ▸ All access routes and entry/exit points will be stabilised as soon as possible with road base or gravel. ▸ Regular watering of unsealed or non-vegetated areas and hard surfaces, with water trucks and hoses until sealing completed. ▸ At the completion of works each day, exposed areas are to be stabilised to prevent dust generation.
	Stockpiling	▸ Limit stockpiling where possible. ▸ Stabilising/covering all dust producing material stockpiled for longer than one month by grass, erosion blanketing, emulsion spray or other applicable methods.

	Vehicles/ Plant	▸ Vehicles should be turned off when not required for operation. ▸ Trucks and vehicles to have sound tailgates and mudflaps in good condition. ▸ Truck loads are to be covered if material is not already wet.
	Burning	▸ No burning off is permitted.
Post-works	Vegetation	▸ Landscaping of completed areas to be established as soon as practical, using locally endemic species, particularly those characteristic of Regional Ecosystems (REs) 7.3.23a and 7.1.4a.

	Monitoring Requirement/s	Corrective Action	Reporting Requirements
Monitoring Reporting and Corrective Action	Visually monitor dust levels on a daily basis.	In the event of any dust related complaints, air quality monitoring will be undertaken in accordance with the *Air Quality Sampling Manual 1997*, and further mitigation measures will be investigated. (Seek advice from Environmental Officer).	Report any breaches, incidents or complaints to the Site Foreman and Project Manager.
	Visually monitor exposed areas are being covered or wetted down and roadways are kept clean at all times.	Increase visitations by water truck to wet down dust generating areas.	Report any breaches, incidents or complaints to the Site Foreman and Project Manager.
	At the completion of works (stage or final), ensure rehabilitation requirements have been undertaken.	Ensure rehabilitation requirements are undertaken as soon as practical.	Report any breaches, incidents or complaints to the Site Foreman and Project Manager.

9.2 Chemicals, fuels, and contaminants

The management of chemicals, fuels and contaminants onsite shall be in accordance with all Principal supplied documentation and the relevant Australian standards and legislation.

Table 8 Management of chemicals, fuels and contaminants

Objective	Management of all chemicals and fuels and contamination of land and water so as not to cause environmental nuisance or harm.
Legislation and guidelines	*Environmental Protection (Water and Wetlands Biodiversity) Policy 2019* *Work Health and Safety Act 2011* *Environmental Protection Act 1994 (Qld)* *Environmental Protection Regulation 2019 (Qld)* *Workplace Health and Safety Act 2011 (Qld)*

	AS1940 – The Storage and Handling of Flammable and Combustible Liquids	
Phase	**Requirement**	**Actions**
Induction	All Staff	▸ Emergency Spill Response (Emergency Procedures). ▸ Site map –storage location, spill response, refuelling servicing areas. ▸ Responsibilities regarding obligations under Duty of Care and Duty to Notify. ▸ Personnel to complete all site inductions applicable before site entry. ▸ Location of MSDS.
Pre-Work	Prior to Work	▸ All vehicles and plant equipment shall be maintained. ▸ Spill response equipment shall be commensurate of the type and quantity of chemicals and fuels being stored on site. ▸ Site map including storage location, spill response equipment, refuelling area to be maintained. ▸ Identification of any sewer or water pipelines.
Construction	General	▸ All chemical and fuel spills shall be cleaned up immediately and disposed of lawfully via the nearest approved facility. ▸ Monitor daily weather conditions (using BOM website). ▸ If heavy rainfall events are expected, works are to cease, and signs of chemical leaks or spills cleaned up and disposed of appropriately before continuation.
	Storage	▸ All hazardous substances must be stored in a bunded area (110% capacity bunding as per AS1940) on site with spill response in close proximity. ▸ The storage area must be in an area away from watercourses, kerb inlet and drainage pits. ▸ Establish and maintain an inventory of hazardous goods and wastes used and/or stored on the site. Store only the minimum quantity necessary of potential contaminants. ▸ Any water trapped in a bunded area after rainfall events are to be tested by a certified environmental technician prior to release. ▸ Maintain records of chemicals and contaminants onsite and update MSDS as necessary.
	Refuelling	▸ Refuelling point to be located > 30m from drainage locations (e.g. outside of high banks of watercourse, culverts, kerb inlet pits, stormwater drains). ▸ Refuelling must be supervised at all times. ▸ A specialised refuelling truck or fuel pods will be used to refuel on site. ▸ Ensure trucks and/or pods are well maintained with hoses in good condition and nozzles sealed and fitted with a stop value at the nozzle end.
	Vehicle/Plant	▸ No vehicle servicing or maintenance of vehicles is permitted on site. ▸ All vehicles and plant equipment shall be maintained and free of leaks.
	Works adjacent to sewer/water pipelines	▸ No heavy machinery to be used immediately next to pipelines without prior identification of locations. ▸ Roots and soil to be removed with pressure cleaner and hand tools. ▸ Leave tree roots in-situ where possible.

Post-works	Remediation	▸ Site free of contaminants. ▸ Remove all contaminated soil and dispose of regulated waste and reinstate the site by importing clean fill, if necessary. ▸ Ensure safe and secure storage of chemicals to be kept onsite during operations and appropriate MSDS kept.

	Monitoring Requirement/s	Corrective Action	Reporting Requirements
Monitoring Reporting and Corrective Action	Inventory checks of spill response equipment to ensure adequate supplies available at all times.	Replace any used or missing spill response equipment.	Report any breaches, incidents or complaints to the Superintendent and Environment Officer.
	Carry out visual inspections on site for evidence of fuel / chemical spills or leaks from storage areas, refuelling areas, machinery, and pipelines.	Contain leak (if safe to do so) Emergency Spill Response (Emergency Procedure) Replace any used or missing spill response equipment. For sewer damage, contact council Water & Waste immediately.	Report any breaches, incidents or complaints to the Superintendent and Environment Officer. Report damaged pipelines to council Water & Waste immediately.
	Visually inspect chemical storage and refuelling areas to ensure they are being managed and maintained.	Return all hazardous substances to the bunded area. All spills to be cleaned up and site remediated. Staff retrained in correct practice.	Report any breaches, incidents or complaints to the Superintendent and Environment Officer.

9.3 Contaminated soils

The management of contaminated soils shall be in accordance with all Principal supplied documentation and the relevant Australian standards and legislation. It is understood that there are no contaminated soils at the Project site, however due diligence should be adhered to in case of location of contamination on-ground.

Table 9 Management of contaminated soils

Objective	To identify, isolate and manage contaminated sites to prevent contamination to the surrounding environment.	
Legislation	*Environmental Protection Act 1994*	
Phase	**Requirement**	**Actions**
Induction	All Staff	▸ Ensure all staff working on site are briefed on specific management requirements and any remediation measures required. ▸ Responsibilities regarding obligations under Duty of Care and Duty to Notify. ▸ Personnel to complete all site inductions applicable before site entry.

Construction	General	▸ Monitor daily weather conditions (using BOM website). ▸ If heavy rainfall events are expected, works are to cease and controls measures to divert drainage away from any contaminated site.
	Earthworks – Contamination Found	▸ All extracted dredge spoil from the Daintree River (< 100,000 t/yr) will be excavated using a ferry, excavator and semi-trailer and transported to the spoil (set down) as per **Section 1.0** ▸ Additional impacts from the use of anchors and pumps may will not be permitted as they may cause significant impacts on the river's structure, bed (outside of the excavation zone), defined banks or vegetation (both in-stream and bank) ▸ Assess the excavated materials and establish management controls (in conjunction with the Safety and Environmental Officer). ▸ If contamination indicators such as but not limited, to discoloured, stained or mottled soils, oily reside or unusual odours are observed during site works, the contractors should engage a contaminated land suitably qualified person (SQP) that meets the DETSI guideline (Assessing a suitably qualified person ESR/2016/1938 to provide advice on how to manage the contaminated land issue) ▸ Delineate the bounds of the contaminated site. ▸ Minimise unnecessary excavation on site. ▸ Put control measures in place to divert any drainage away from the contaminated site to prevent any runoff entering waterways and stormwater drains. ▸ Bund off contaminated sites during rainfall, if required.
	Stockpiling	▸ No stockpiling of hydrocarbon contaminated materials on site. ▸ Ensure stockpiles of fill unsuitable for construction are appropriately covered and or rehabilitated with vegetation within the site.
	Transport & Disposal	▸ Remove excavated hydrocarbon contaminated materials to an approved disposal facility as soon as practicable. ▸ Ensure all tracking requirements are adhered to if the waste is a trackable waste. ▸ Ensure all contaminated materials are removed by regulated waste licensed vehicles or a disposal permit to a regulated waste facility.
Post-works	Remediation	▸ Ensure the site is adequately remediated to prevent any future contamination of the surrounding environment. ▸ Landscaping of completed areas to be established as soon as practical, using locally endemic species, particularly those characteristic of Regional Ecosystems (REs) 7.3.23a and 7.1.4a.

	Monitoring Requirement/s	**Corrective Action**	**Reporting Requirements**
Monitoring Reporting and Corrective Action	Monitor excavated areas and materials for any signs of contamination by a suitably qualified person.	CEASE work and introduce any controls are advised to prevent the spread of contamination. Bund off contaminated sites during rainfall events, if required. Place diversion channels to direct surface flow away from the contaminated area.	If any contaminated areas or materials are identified, immediately notify the site foreman and project manager.

	Visually inspect the site to ensure contaminated materials are being managed in accordance with this EMP.	Manage contaminated materials in accordance with EMP straightway. If not adequate, seek further advice from project manager.	Report any breaches, incidents or complaints to the Site Foreman and Project Manager.
	Ensure all contaminated materials are being disposed of via regulated waste transport vehicles to the regulated waste disposal facility.	Remove excavated contaminated materials to an approved disposal site as soon as practicable.	Report any breaches, incidents or complaints to the Site Foreman and Project Manager.

9.4 Cultural heritage

The management of Cultural Heritage shall be in accordance with all Principal supplied documentation and the relevant Australian standards and legislation.

Table 10 Management of cultural heritage

Objective	To take all reasonable and practicable measure to ensure the construction does not harm Indigenous and non-Indigenous cultural heritage artefacts, site and values within the worksite and adjacent to the worksite.	
Legislation	*Aboriginal Cultural Heritage Act 2003* *Queensland Heritage Act 1992*	
Phase	**Requirement**	**Actions**
Induction	All Staff	▸ Notify all personnel on site of known area/items of cultural heritage and/or exclusion zones in the event an item of cultural significance is uncovered. ▸ Responsibilities regarding obligations under Duty of Care and Duty to Notify. Personnel to complete all site inductions applicable before site entry. ▸ All staff understand Cultural Monitoring requirements/protocols.
Construction	Water/Ground Disturbing Activity	Pre-work: ▸ Exclusion zones are clearly marked onsite prior to commencement of works. Works Process: ▸ Vehicles keep to designated access tracks. ▸ Limit stockpiling and laydown to designates areas. ▸ Only clear what is necessary to carry out the works. ▸ Marked limits in relation to exclusion zones shall remain visible for the duration of works. New Finds Procedure: ▸ In the unlikely event that suspected archaeological artefacts and/or human remains are uncovered during the works, provisions outlined under the Queensland *Aboriginal Cultural Heritage Act 2003* must be followed and the discovery will

		require notification to DETSI and the project Principal. Works must cease immediately. ▸ The Project Superintendent will promptly arrange for the site to be inspected and assessed for cultural significance. ▸ The Project Superintendent may declare the object and/or area an exclusion zone for a period at their discretion. ▸ Erect exclusion zones are directed by the Project Superintendent and preclude access to these areas at all times, until further advice is provided. ▸ Notify all personnel on site of the object and/or area and proposed treatment of the object and/or area as soon as possible.

	Monitoring Requirement/s	Corrective Action	Reporting Requirements
Monitoring Reporting and Corrective Action	Provide a Cultural Heritage Management Plan to outline exclusion zones of known sites of significance in line with the Queensland *Aboriginal Cultural Heritage Act 2003.*	N/A	Cultural Heritage Management Plan
	Protect and exclude impact to existing known sites of significance and monitor them throughout the construction and sealing process.	If any impact is observed, CEASE work immediately. Follow all directions given by the Project Superintendent.	Monitoring of known sites with evidence prior and post construction of any impacts.
	Visually inspect the site for any disturbance to Cultural Heritage items of significance if uncovered.	CEASE work immediately. Follow all directions given by the Project Superintendent. Investigate an alternative construction process to preserve finds.	Report any breaches, incidents or complaints to the Site Foreman and Project Manager.
	Visual assessment of the exclusion zone/s if items uncovered.	CEASE work immediately. Re-instate exclusion zones. Retrain staff.	Report any breaches, incidents or complaints to the Site Foreman and Project Manager.

9.5 Erosion and sediment control

The management of soil and water - including erosion and sediment, shall be in accordance with all Principal supplied documentation and the relevant Australian standards and legislation.

Table 11 Management of erosion and sediment control

Objective	To install measures to control erosion and sediment throughout the worksite, to ensure works do not result in erosion and sedimentation that causes environmental harm or nuisance outside of the worksite.

Legislation and Guidelines	*Environment Protection Act 1994* *Environmental Protection (Water and Wetlands Biodiversity) Policy 2019* *Soil Erosion and Sediment Control, Engineering Guidelines for Queensland Construction Sites - IEAust (Qld) 1996* *International Erosion Control Association (IECA) Best Practice Erosion and Sediment Control guidelines*	
Phase	**Requirement**	**Actions**
Induction	All Staff	▸ Importance of erosion and sediment control measures and vicinity of fish habitat areas. ▸ Responsibilities regarding obligations under Duty of Care and Duty to Notify. Personnel to complete all site inductions applicable before site entry.
Pre-Work	Prior to Work	▸ Ensure all erosion and sediment control measures are installed prior to any excavation works on site.
Construction	General	▸ Monitor daily weather conditions (using BOM website). ▸ If heavy rainfall events are expected, works are to cease, and all exposed soil areas are to be covered, or adequate controls implemented and maintained.
	Clearing	▸ Avoid disturbance to grassed areas as much as possible. ▸ Do not drive vehicles on grassed areas. Keep to the designated access tracks once installed.
	Earthwork	▸ All controls must be always installed and maintained in good working order. ▸ Minimise clearing and management of topsoil on site. ▸ Stage works to minimise the time length of exposed areas including the bunded spoil area (set down) ▸ At the completion of works each day, ensure adequate controls to prevent erosion and potential sediment runoff are in place. ▸ Surface runoff will be diverted around erosion prone areas. ▸ Reverse vehicles into dumping points and drive straight out, do not turn trucks around on grassed areas on the esplanade. ▸ Landscaping of completed areas to be established as soon as practical.
	Stockpiling	▸ Limit stockpiling. ▸ Locate stockpiles away from watercourses and stormwater drains. ▸ Any soil stockpiles left overnight will be covered with black plastic or similar.
	Roadways	▸ During works and at the end of each day, sweep up any sediment on the roadway and in kerb and channel to reduce movement of sediment into stormwater system and from creating a public nuisance.
	Drains	▸ Areas that carry water offsite should be protected from erosion to minimise water quality impacts.
Post-works	Landscaping	▸ At the completion of works, any exposed areas will be grassed, turfed or hydro mulched to prevent erosion. ▸ Landscaping of completed areas to be established as soon as practical, using locally endemic species, particularly those characteristic of Regional Ecosystems (REs) 7.3.23a and 7.1.4a.

	Monitoring Requirement/s	**Corrective Action**	**Reporting Requirements**

Monitoring Reporting and Corrective Action	Visually inspect exposed areas to ensure there are appropriate controls in place to minimise erosion and sediment runoff.	Review and implement adequate control measures. (seek advice from Project manager).	Report any breaches, incidents or complaints to the Site Foreman and Project Manager.
	Monitor drainage, erosion and sediment control measures each day to ensure they are adequate and functioning.	Clean in front of sediment control devices to ensure capacity does not reach 50% to always ensure maximum efficiency. Implement further measures to improve water quality.	Report any breaches, incidents or complaints to the Site Foreman and Project Manager.
	At the completion of works (stage or final), ensure rehabilitation requirements have been undertaken.	Ensure rehabilitation requirements are undertaken as soon as practical.	Report any breaches, incidents or complaints to the Site Foreman and Project Manager.

9.6 Fauna

The management of fauna shall be in accordance with all Principal supplied documentation and the relevant Australian standards and legislation.

Table 12 Management of fauna

Objective	To minimise disturbance and harm to native fauna as much as possible if encountered on the worksite.	
Legislation	*Environment Protection and Biodiversity Conservation Act 1999 (Cwth)* *Nature Conservation Act 1992 (Qld)* *Nature Conservation (Plants) Regulation 2020 and Nature Conservation (Animals) Regulation 2020* *Vegetation Management Act 1999 (Qld)* *Environmental Protection Act 1994 (Qld)* *Biosecurity Act 2014*	
Phase	**Requirement**	**Actions**
Induction	All Staff	▸ Known fauna significance on-site. ▸ Emergency procedures. ▸ Responsibilities regarding obligations under Duty of Care and Duty to Notify. ▸ Personnel to complete all site inductions applicable before site entry. ▸ Fauna only to be relocated by qualified fauna spotter catcher.
Pre-Work	Prior to Work	▸ Approvals for any impacts to habitat and breeding places.

Construction	General	▸ Do not feed or interact (touch, hold) native fauna at any time on the site. ▸ In the event fauna is found injured, nesting or sheltering on site and cannot be moved on safely, a suitably qualified fauna spotter/catcher who holds a damage mitigation-rehabilitation permit under the *Nature Conservation Act 1992* is to be engaged to safely capture and treat the animal. ▸ The closest veterinary surgeon and hospital is Coral Sea Vet Care, located at 47 Front Street, Mossman, QLD 4873 (07 4098 1999, reception@coralseavetcare.com.au) ▸ Exclude domestic pets from the work site whilst under construction. ▸ Bins are to be present on site and fitted with lids and serviced regularly to minimise attraction of native fauna throughout construction.
	Clearing	▸ Only clear what is necessary to carry out the works. ▸ A qualified spotter catcher must be present during any vegetation clearing. ▸ Undertake daily fauna preclearance surveys prior to commencement of clearing activities.
	Earthworks	▸ Emergency procedures wildlife injuries, crocodile spotting and snake management (presume venomous).

	Monitoring Requirement/s	**Corrective Action**	**Reporting Requirements**
Monitoring Reporting and Corrective Action	Monitor the occurrence of native fauna on the worksite.	Take all appropriate measures to ensure disturbance, injury or death to native fauna does not occur again.	Report any breaches, incidents or complaints to the Site Foreman and Project Manager. If injured or dangerous, refer to the Emergency Procedure.

9.7 Flora

The management of flora shall be in accordance with all Principal supplied documentation and the relevant Australian standards and legislation.

Table 13 Management of flora

Objective	To minimise disturbance to vegetation as much as possible.	
Legislation	*Environment Protection and Biodiversity Conservation Act 1999* *Coastal Protection and Management Act 1995* *Fisheries Act 1994* *Vegetation Management Act 1999* *Nature Conservation Act 1992* *Planning Act 2016* *Biosecurity Act 2014*	
Phase	**Requirement**	**Actions**

Induction	All Staff	▸ Clearing limit and exclusion areas. ▸ Responsibilities regarding obligations under Duty of Care and Duty to Notify. Personnel to complete all site inductions applicable before site entry.
Pre-Work	Prior to Work	▸ Natural Assets Local Law approval must be obtained from the local council prior to any vegetation clearing. ▸ Clearing limits must be clearly marked onsite before clearing commences.
Construction	Clearing	▸ The marked limits shall remain visible for the duration of the clearing and grubbing works and excavation works, where practical.
Post-works	Remediation	▸ Where practical – re-use of chip or mulch on-site. ▸ Landscaping of completed areas to be established as soon as practical, using locally endemic species, particularly those characteristic of Regional Ecosystems (REs) 7.3.23a and 7.1.4a.

	Monitoring Requirement/s	Corrective Action	Reporting Requirements
Monitoring Reporting and Corrective Action	Monitor clearing to ensure it is being done within approved clearing limits.	CEASE work and return within approved clearing limits. If damage has been caused, barricade off area, rectify damaged vegetation (in accordance with AS4373). Seek further advice from Project manager.	Report any breaches, incidents or complaints to the Site Foreman and Project Manager.
	Monitor work site to ensure vehicles, plant or equipment are not to be stored under the drip line of vegetation.	Remove vehicles, plant and equipment from the area and advise all staff of this requirement.	Report any breaches, incidents or complaints to the Site Foreman and Project Manager.

9.8 Noise

The management of noise shall be in accordance with all Principal supplied documentation and the relevant Australian standards and legislation.

Table 14 Management of noise

Objective	To minimise noise associated with the works at all times and to not cause undue disturbance to the public or cause environmental nuisance or harm.
Legislation	*Environment Protection Act 1994* *Environmental Protection (Noise) Policy 2019 (Qld)* *Workplace Health and Safety Act 2011 (Qld)* *AS 1055.1 & .2: Acoustics—Description and measurement of environmental noise*

	AS 2436: Guide to noise control on construction, maintenance, and demolition sites			
Phase	**Requirement**	**Actions**		
Induction	All Staff	▸ Designated work hours and scheduling. ▸ Responsibilities regarding obligations under Duty of Care and Duty to Notify. ▸ Personnel to complete all site inductions applicable before site entry.		
Pre-Work	Prior to Work	▸ Community Consultation about the project and work times (undertaken by the Contractor's Representative). ▸ Ensure all plant & equipment is in good working order and has noise suppression devices fitted where applicable. ▸ Erect bunding, enclosures and screening to dampen noise.		
Construction	Vehicles/ Power tools	▸ Select low noise emission plant and equipment to reduce potential noise emission. ▸ Vehicles should be turned off when not required for operation.		
	Work Times	▸ Construction work to be restricted to between 07:00 to 17:00 Monday to Friday.		
Monitoring Reporting and Corrective Action	**Monitoring Requirement/s**		**Corrective Action**	**Reporting Requirements**
	Monitor site and finish times each day.		In the event of any noise related complaints, monitoring will be undertaken in accordance with the EPA Noise Management Manual 2000, and further mitigation measures will be investigated. Seek further advice from Project Manager.	Report any breaches, incidents or complaints to the Site Foreman and Project Manager.
	Make daily observations of equipment and assess whether equipment requires servicing.		In the event of any noise related complaints, monitoring will be undertaken, and further mitigation measures will be investigated.	Report any breaches, incidents or complaints to the Site Foreman and Project Manager.

9.9 Pest management

The management of pests shall be in accordance with all Principal supplied documentation and the relevant Australian standards and legislation.

Table 15 Management of pests and weeds

Objective	To identify and manage all declared pests (plants and animals) within the worksite by preventing their spread on and off site.	
Legislation	*Biosecurity Act 2014*	
Phase	**Requirement**	**Actions**

Induction	All Staff	▸ Known feral or declared weed location and management. ▸ Responsibilities regarding obligations under Duty of Care and Duty to Notify. ▸ Personnel to complete all site inductions applicable before site entry. ▸ Only a Pest Controller with suitable qualifications will carry out control measures.
Pre-Work	Prior to Work	▸ Ensure a designated washdown facility is nominated either on-site or off-site and that all machinery and equipment reaches this designated point prior to works for inspection (see Biosecurity Queensland, 2019). ▸ Treat any infestations uncovered onsite prior to disturbance of the existing surface. ▸ Undertake a pre-start electric ant/crazy ant inspection of the works footprint should this be within the species mapped locations.
Construction	Materials	▸ Construction materials to be checked for signs of weeds prior to entering the site. ▸ Materials containing infestation disposed of at appropriate facilities. ▸ Sourcing where possible, source materials from outside an electric ant biosecurity zone. Where this is not possible, only use suppliers that have a biosecurity instrument permit.
	Vehicles/Plant	▸ Ensure that all machinery and equipment reaches this designated washdown facility prior to works for inspection. ▸ Machinery and equipment to be washed down with Virkon multipurpose disinfectant (see https://www.agriculture.gov.au/biosecurity-trade/import/arrival/arrangements/requirements/disinfectants for guidance). ▸ Material deliveries also to be washed down using disinfectant prior to use. ▸ Ensure construction plant and vehicles are cleaned prior to movement into other areas in the event a pest species in uncovered. ▸ Vehicles shall remain on sealed areas and road shoulders, where practicable.
	Temporary Wash Down Bays	▸ In the event a declared pest is uncovered, a temporary clean-down bay shall be located >200m from a stormwater drain, waterway of sensitive area, designed to capture weed seeds, oils, greases and sediments and prevent vehicle recontamination and located appropriately for ease of maintenance.

	Monitoring Requirement/s	**Corrective Action**	**Reporting Requirements**
Monitoring Reporting and Corrective Action	Inspect all machinery entering the site to ensure it is clean.	Remove vehicles, plant and equipment from the site and re-advise all staff of this requirement prior to entering the site.	Report any breaches, incidents or complaints to the Site Foreman and Project Manager.
	Inspect construction materials being brought onto the site to ensure they are clean and uncontaminated	Order material to be returned to supplier and uncontaminated materials be supplied to the site.	Report any breaches, incidents or complaints to the Site Foreman and Project Manager.
	If washing down is required on site, inspect the clean-down bay to ensure it is adequately bunded and being maintained effectively.	Rectify existing controls or consider putting further controls in place.	Report any breaches, incidents or complaints to the Site Foreman and Project Manager.

	If electric ants/crazy ants are detected, it is to be reported immediately to DAF	Refer to DAF's ant control regulations	Report any electric ant/crazy ants to Department of Agriculture and Fisheries (DAF) – Biosecurity Queensland.

9.10 Potential acid sulphate soils and actual acid sulphate soils

The management of potential acid sulphate soils (PASS) and actual acid sulphate soils (ASS) shall be in accordance with all Principal supplied documentation and the relevant Australian standards and legislation.

Table 16 Management of PASS and ASS

Objective	To identify and manage potential and actual acid sulphate soils within the worksite to prevent contamination to the surrounding environment.	
Legislation	*Environmental Protection Act 1994* *Planning Act 2016*	
Phase	**Requirement**	**Actions**
Induction	All Staff	▸ Notify all personnel on site of known PASS/ASS. ▸ Responsibilities regarding obligations under Duty of Care and Duty to Notify. ▸ Personnel to complete all site inductions applicable before site entry.
Pre-Work	Prior to Work	▸ Where the action criteria are triggered, a detailed management plan will be required for these disturbances (groundwater and earthworks) ▸ Where required, treatment area should be designated, constructed, and approved. ▸ Where required, disposal area should be designated and approved ▸ Where required, suitable resources should be made available to monitor and treat soil (lime) and monitor and treat surface runoff and groundwater ▸ Identify appropriate ASS storage facility
Construction	Best Practice	▸ Avoid disturbance to ASS as much as possible. This is the preferred means of managing ASS.
	Potential Acid Sulphate Soil (Potential ASS)	▸ No oxidation of Potential ASS prior to strategic reburial. ▸ Stage excavation works to ensure that Potential ASS can be strategically reburied as soon as possible. ▸ Strategic reburial of Potential ASS at least one metre below the permanent water table, or several metres below permanent standing water. ▸ Potential ASS should be transported quickly from the excavation area to the burial site. Delays due to unforeseen circumstances should be at most one night (18 hours) ▸ Potential ASS shall only be transported in suitably equipped vehicles (sealed tailgates) ▸ Temporary storage of Potential ASS will require establishment of a guard layer; neutralising agent (e.g. ag-lime) should also be spread over the stockpile; Temporary

		bunding is needed around the stockpiles to collect any leachate, soil or lime washed off during overnight/weekend storms or rainfall events. ▸ If groundwater levels are not affected by earthworks, then undisturbed in situ potential ASS can be covered with clean fill to provide adequate clearance for infrastructure.
	Disturbed Acid Sulphate Soils (ASS)	▸ ASS encountered below the base of excavations (which are not subject to a change in water and oxygen regime) do not require treatment. ▸ ASS exposed as part of excavated materials and left exposed in cuttings require treatment. If excavation lines are being exposed for long periods of time, treat with lime. ▸ Any area of disturbed ASS must be treated as potentially contaminated and set up bunding, diversion drains or treatment ponds to contain any surface runoff. Runoff shall be contained, managed, and treated to acceptable levels before discharge to watercourses ▸ Prevent the infiltration of surface water through ASS to groundwater. If this is not possible, surface applications of neutralising agents may be required ▸ Ensure ASS materials are separated from non-ASS material to avoid contamination. ▸ No stockpiling of acid sulphate soils on site ▸ Do not place ASS on top of marine plants or native vegetation

	Monitoring Requirement/s	**Corrective Action**	**Reporting Requirements**
Monitoring Reporting and Corrective Action	Visually inspect the site after each rainfall event to determine the presence of acid sulphate soil. i.e. iron staining; poor plant growth or acid scalds; corrosion, fish kill.	Conduct water and soil sampling to determine if water needs to be bunded and neutralised (addition of hydrated lime). Project manager to determine a suitable course of action.	Report any breaches, incidents or complaints to the Site Foreman and Project Manager.
	Visually inspect ASS materials to ensure they are being managed its	Any excavated waste material that is not disposed of correctly is to be removed and disposed of at a licensed facility as advised by the Project manager.	Report any breaches, incidents or complaints to the Site Foreman and Project Manager.

9.11 Vibration

The management of vibration shall be in accordance with all Principal supplied documentation and the relevant Australian standards and legislation.

Table 17 Management of vibration

Objective	To take measures to minimise vibration associated with the works at all times and to not cause environmental nuisance or harm.
Legislation	*Environment Protection Act 1994*

	Environmental Protection Regulation 2008		
Phase	**Requirement**	**Actions**	
Induction	All Staff	▸ Identify Sensitive Areas that may be affected by vibration. ▸ Designated work hours. ▸ Responsibilities regarding obligations under Duty of Care and Duty to Notify. ▸ Personnel to complete all site inductions applicable before site entry.	
Pre-Work	Prior to Work	▸ Community Consultation (conducted by Contractor's Representative).	
Construction	Work Time	▸ Schedule/stage works to minimise prolonged time spent adjacent to nuisance sensitive areas. ▸ Construction work to be restricted to between 0700 to 1500 Monday to Friday. ▸ Out of hours works are required by the project outside of the hours of operation detailed in section 440R of the EP Act, a risk assessment must be undertaken.	
	Vehicles/ Plant	▸ Site noisy equipment away from noise sensitive areas. ▸ Vehicles should be turned off when not required for operation.	
Monitoring Reporting and Corrective Action	**Monitoring Requirement/s**	**Corrective Action**	**Reporting Requirements**
	Monitor site and finish times each day.	In the event of any vibration related complaints, monitoring will be undertaken, and further mitigation measure will be investigated.	Report any breaches, incidents or complaints to the Site Foreman and Project Manager.
	Monitor vibration causing activity adjacent to sensitive areas at all times during works.	In the event of any vibration related complaints, monitoring will be undertaken, and further mitigation measure will be investigated. (Seek advice from the Project manager).	Report any breaches, incidents or complaints to the Site Foreman and Project Manager.

9.12 Waste

The management of waste shall be in accordance with all Principal supplied documentation and the relevant Australian standards and legislation.

Table 18 Management of waste

Objective	Adopt a waste management hierarchy of waste avoidance, waste re-use, waste reduction, and recycle as much as possible. No evidence of litter or refuse generated from construction related activities. No contamination of land, air, or water as a result of inappropriate waste management.

Legislation	*Environment Protection Act 1994* *Waste Reduction and Recycling Act 2011* *Waste Reduction and Recycling Regulation 2011*		
Phase	**Requirement**	**Actions**	
Induction	All Staff	▸ Minimise waste generation and disposal of waste. ▸ Responsibilities regarding obligations under Duty of Care and Duty to Notify. ▸ Personnel to complete all site inductions applicable before site entry.	
Pre-Work	Prior to Work	▸ Purchase the minimum number of materials and packaging necessary to carry out the project.	
Construction	General Waste	▸ Dispose of all litter and domestic refuse into proper covered bins and remove and discard appropriately at the end of each workday. ▸ No waste or litter shall be burnt on sites. ▸ No waste or litter shall be buried on site. ▸ During works, maintain the site free of litter at all times.	
	Regulated Waste	▸ All regulated waste to be disposed of by a licenced contractor to a regulated waste facility. ▸ Ensure all waste tracking requirements are adhered to at all times.	
Post-works	Remediation	▸ Upon completion of works, remove all litter, rubbish and waste generated as a result of the works from the site	
Monitoring Reporting and Corrective Action	**Monitoring Requirement/s**	**Corrective Action**	**Reporting Requirements**
	Visually inspect the site to ensure waste and litter is being disposed of properly.	All litter, rubbish, and waste to be immediately placed into proper bins for disposal.	Report any breaches, incidents or complaints to the Site Foreman and Project Manager.
	Conduct a final site inspection at completion of works to ensure all wastes have been removed from the site.	Superintendent to inform the Site Supervisor of any areas not cleaned up satisfactorily and to be rectified immediately.	Report any breaches, incidents or complaints to the Site Foreman and Project Manager.

9.13 Water quality

The management of water quality shall be in accordance with all Principal supplied documentation and the relevant Australian standards and legislation.

Table 19 Management of water quality

Objective	Protect water environmental variables by minimising hydrologic disturbance and the loads of contaminants in runoff. Works will achieve compliance with the Queensland Water Quality Guidelines	
Legislation	*Environment Protection Act 1994* *Environmental Protection (Water and Wetland Biodiversity) Policy 2019* *Australian and New Zealand Water Quality Guidelines, ANZG 2018* *Water Act 2000 (Qld)* *Environmental Protection (Sea Dumping) Act 1981 (Cth)*	
Phase	**Requirement**	**Actions**
Induction	All Staff	▸ Potentially affected watercourses, kerb inlet and drainage pits ▸ Responsibilities regarding obligations under Duty of Care and Duty to Notify. ▸ Personnel to complete all site inductions applicable before site entry.
Pre-Work	Prior to Work	▸ Ensure all temporary and permanent drainage control measures are in place prior to commencing works
Construction	General	▸ Monitor daily weather conditions (using BOM website). If heavy rainfall events are expected, reschedule high risk works. ▸ Do not use chemical or potential contaminants near or in waterways, stormwater drains or on the groyne structure unless authorised.
	Stencilling/ Colour Work/ Line Marking	▸ Lay down plastic to collect stencilling / colour hardener in the event repairs are required to access along public roadways. ▸ Use industrial vacuum to clean colour hardener.
	Concrete Works	▸ Place check dams and filter socks in downslope surface drains to trap and spilt material and control movement during pumping works. All spilt material shall be cleaned up before removing these temporary bunds. ▸ Use a vacuum to clean up any concrete slurry waste left. ▸ On-site concrete mixing should be carried out in an area capable of containing any excess water, residue, or waste. ▸ Wastewater from concrete works or wash-down must not be allowed to discharge to the stormwater system and must be disposed of to a licensed disposal facility. ▸ Concrete trucks, pumps and equipment must not be washed down on footpaths or roadways. Concrete pumping contractor shall not clean pumps on works site. ▸ Washing down of concrete equipment will be minimised on site and should be washed down at the Depot Wash-down Facility. ▸ If required, the concrete spoon shall be washed down within a designated contained area on site where runoff can be controlled, and waste concrete slurry allowed to dry. This dry residue should be cleaned up and disposed of to a licensed waste disposal facility.
	Asphalt Works	▸ No pre-coating of aggregates shall be conducted on site. ▸ Place check dams and filter socks in surface drains to control movement, allow clean-up and minimise the risk of asphalt runoff entering surface drains.
	Monitoring Requirement/s	**Corrective Action** / **Reporting Requirements**

Monitoring Reporting and Corrective Action	Prior to the release of any water from the site, water should be tested to ensure compliance. Seek advice from the Project manager.	Implement further measures to improve water quality i.e., filtration skip.	Report any breaches, incidents or complaints to the Site Foreman and Project Manager.
	Visually monitor water quality each day for the presence of plumes.	Undertake water testing to determine level of compliance. Implement further measures to improve water quality.	Report any breaches, incidents or complaints to the Site Foreman and Project Manager.

9.14 Access

The management of access shall be in accordance with all Principal supplied documentation and the relevant Australian standards and legislation.

9.15 Fire prevention

Bushfire and smoke are significant risks to the project, the surrounding environment, the project staff and contractors. As such, bushfires safety measures must be implemented each day prior to starting works. This will include the following actions which should also form part of a project Safe Work Method Statement (SWMS):

- Check Queensland Rural Fire Service website for local conditions and planned back-burns prior to work
- Check fire rating each day prior to toolbox meeting – take additional care on Extreme or Catastrophic fire rated days (information available: www.ruralfire.qld.gov.au and www.bom.gov.au)
- Ensure emergency routes to and from site are known by all on-site staff
- Evacuate site if smoke is noted in proximity to the works areas or surrounding environment

Any alterations to landscaping and vegetation management should be done in accordance with an approved Bushfire Management Plan (BMP) such that inner and outer radiation zones are mapped and maintained with appropriate planting and maintenance.

Fire extinguishers shall be fitted to all light vehicles and mobile plant, and will be located near hazardous substance storage areas and stationary plant or equipment that has the potential to cause a fire. Fire extinguishers will also be located:

- In the main office compound and satellite office compounds
- At other locations as deemed appropriate during the contract works

If it is determined that works may be high fire-risk or are hot works (involving welding etc.), then fire-fighter water storage supplies should be stored safely and securely in above-ground tanks, of non-flammable construction, and with metal piping and fittings, on-site. Preferably water storage should exceed 10,000 litres

on-site. Access to this water should be by a formed vehicular surface ≥ 3.5 m wide and with ≥ 4.8m overhead clearance. Load-bearing capacity must be ≥ 15 tonnes.

All flammable substances will be suitably stored away from potential ignition sources. The lighting of fires including smoking except in designated areas shall be prohibited on the construction site.

9.16 Plant and equipment

Plant and equipment shall be maintained in a safe and serviceable manner at all times.

The following guidelines apply:

- Plant pre-delivery inspections are to be completed on plant prior to commencing works on site. Any defects found in this inspection shall be rectified prior to commencing works.
- Daily plant prestart checks shall be completed prior to commencing works on a daily basis.
- Plant shall be serviced in suitable areas, away from water courses. Spill trays, drop pans or similar shall be used to prevent spills. Suitable spill kits shall be located at the service location prior to commencing. Waste oil, filters and the like shall be removed from site and disposed of at an approved recycling centre.
- Fuelling shall be carried out at least 50m away from water courses where practicable. In cases where this is not possible, the plant shall be located to a position as far from a watercourse as possible and suitable spill trays or similar used to capture any spilt fuel. The fuel nozzle shall be placed in the tank prior to operating fuel pump and the pumping shall cease before the nozzle is removed from the tanks. Tanks to be closely monitored during filling to prevent overflowing. Suitable spill kits shall be located at the refuelling site prior to commencing.
- Plant and equipment shall be maintained to prevent / fix oil leaks.
- Plant shall be driven and operated only in approved areas.
- Plant shall have effective pollution control and sound attenuation devices fitted.
- A refuelling operations SWMS will be followed.

10.0 Environmental emergency and response

The types of environmental emergencies that could occur on this site are outlined in **Table 20**.

Table 20 Environmental emergency response

Type of Emergency	Preparation for Emergency	Response to the Emergency
Minor spill of hazardous substance (< 5L)	▸ Awareness training of appropriate response and procedures to be incorporated into Site Induction ▸ Material Safety Data Sheets (SDS) on site for all materials and kept up to date ▸ Spill kits of appropriate size must be provided for all machinery and activities being operated including at the site's main compound. These must be available at all times.	▸ Isolate source of spill ▸ Report spills immediately to Contractor's Representative who will notify the Project Superintendent. ▸ Attempts to be made to limit or contain the spill using sandbags to construct a bund wall, use of absorbent material, temporary sealing of cracks or leaks in containers, use of geotextile or silt fencing to contain the spill. ▸ Contractor's Representative and Safety Representative to coordinate the response, clean up and disposal of the material. ▸ Material to be disposed of in accordance with the manufacturer's recommendations and applicable legislation.
Major spill of hazardous substance (> 5L)	▸ Awareness training of appropriate response and procedures to be incorporated into Site Induction. ▸ SDS on site for all materials and kept up to date.	▸ Isolate source of spill ▸ Report spill immediately to Contractor's Representative who will notify the Project Superintendent. ▸ Attempts to be made to limit or contain the spill using sandbags to construct a bund wall, use of absorbent material, temporary sealing of cracks or leaks in containers, use of geotextile or silt fencing to contain the spill, righting overturned containers, transferring

Type of Emergency	Preparation for Emergency	Response to the Emergency
	▸ Adequate supply of absorbent materials available in the site compound and on vehicles in work location ▸ Emergency telephone numbers prominently displayed around office and issued to supervisors.	remaining material. Contractor's Representative to implement procedures to notify the relevant authorities in accordance with the approval and legislative requirements. ▸ Contractor's Representative to coordinate the response, clean up and disposal of the material. ▸ If spill is regarded to be outside the onsite resources, then the fire brigade should be called. ▸ Where appropriate, evacuation procedures are to be implemented to remove non-essential personnel from the affected area. ▸ Emergency response members are consulted. ▸ On site construction personnel are informed of the incident ▸ Access and egress to the area is established to ensure the appropriate vehicles have effective access and congestion is minimised. ▸ If the fire brigade attends, their senior officer assumes control of the operation. ▸ A full investigation report of the event is to be completed by the Contractor's Representative as soon as practicable after the area has been secured.

Type of Emergency	Preparation for Emergency	Response to the Emergency
Flood	▸ Remove plant and equipment from low lying areas. ▸ If plant cannot be removed, ensure it is secured and in a position where it is unlikely to cause damage. ▸ Monitor flood warnings. ▸ Maintain high standard for erosion and sedimentation controls.	▸ Stow all minor and small equipment into containers that are to be sealed. ▸ Ensure all other materials and plant are either removed from flood affected areas or stowed and secured. ▸ All chemicals, fuels and other hazardous substances to be in secured containers and stored within a sealable shipping container. ▸ Ensure that construction materials and rubbish does not leave the site. ▸ Check effectiveness of erosion and sedimentation devices and other flood controls.
Cyclone / Severe Storm / High Wind	▸ Monitor cyclone/storm warnings for the area. ▸ Ensure First Aid supplies are well stocked and adequate	▸ Evacuate all nonessential personnel. ▸ Secure all plant, equipment and materials. ▸ Remove plant and equipment from flood prone areas. ▸ If plant cannot be removed, ensure it is secured and in a position where it is unlikely to cause damage. ▸ Stow all minor and small equipment into containers, which are to be sealed. ▸ Ensure all other materials are either removed from flood prone areas or stowed and secured. ▸ All chemicals to be in secured containers and stored within a sealable shipping container.

Type of Emergency	Preparation for Emergency	Response to the Emergency
Fire (other than bushfire)	▸ Awareness training of appropriate response and procedures to be incorporated into Site Induction. ▸ Awareness of fire evacuation routes ▸ Fire extinguishers maintained, clearly labelled and distributed around site compound and vehicles. ▸ First Aid supplies are stocked and adequate.	▸ For small fires, attempts to be made to extinguish the fire or limit its spread with available fire extinguishers or water hoses if appropriate. ▸ Contractor's Representative to be informed immediately. ▸ Contractor's Representative to contact external services where necessary (fire, ambulance) as a precautionary measure. ▸ All personnel in the vicinity to be assembled in the Evacuation Assembly Area and a head count performed. ▸ Any resulting fuel or chemical spill to be handled as detailed above. ▸ Contractor's Representative to coordinate with emergency services and provide assistance as required.
Bushfire	▸ Awareness training of appropriate response and procedures to be incorporated into Site Induction. ▸ Awareness of fire evacuation routes ▸ Check fire rating each day prior to toolbox meeting – take additional care on Extreme or Catastrophic fire rated days (information available: www.ruralfire.qld.gov.au and www.bom.gov.au) ▸ Monitoring of bushfire warnings and updates. ▸ First aid supplies are stocked and adequate.	▸ On-site fire-fighter water is stored safely on-site if required. ▸ External services (fire, ambulance) to be contacted. ▸ Contractor's Representative to be notified immediately ▸ All personnel in the vicinity to be assembled in the Evacuation Assembly Area and a head count performed. ▸ All plant and equipment to be secured. ▸ All fuels and chemicals to be stored and secured within hazardous container. ▸ Contractor's Representative to liaise with emergency personnel and provide assistance as required. ▸ All non-essential personnel to be evacuated from the site on advice from emergency personnel.

10.1 Emergency contacts

In case of an emergency contact 000 or the relevant contact number in **Table 21** below.

Table 21 Emergency contacts

Ambulance Service	000
Chemical Hazards Information Centre	(07) 3247 8444
DETSI Pollution Hotline 24 hours	1300 130 372
DETSI Regional Centre Cairns	(07) 4722 5211
Fire Service	000
Mossman Medical Centre	(07) 4098 1248
Poison Information Centre	131126

11.0 Incident notification

The Project Manager is accountable for ensuring all necessary reporting and notifications take place after an incident or emergency in accordance with this plan. **Appendix A** provides an incident/corrective action report template.

11.1 Internal incident notification

The Project Engineer, Contractor's Representative, or their delegate, will be responsible for reporting all incidents. Incident reports will be reviewed by the Responsible Manager and approved within five working days or before month end in which the incident occurred.

11.2 External incident notification

All environmental incidents resulting in, or potentially resulting in any of the following must be reported immediately to the Project Manager as soon as any contractor or personnel become aware of the incident, and is to be followed by written notification within 24 hours of such an incident:

- Any failure to comply with any conditions of the EMP.
- Actual Material or Serious Environmental Harm (as defined in the *Environmental Protection Act 1970*).
- Reportable breach of legislation.
- Breach of an Approval condition/s.
- Injury or death of native fauna other than least concern species.
- Tampering with a native animal breeding place(s) other than in accordance with the applicable Species Management Plan.
- Ground disturbance or vegetation clearing beyond the Contractual Limits of Clearing (or otherwise deemed suitable by the Administrator).
- Damage to Aboriginal and/or historic Cultural Heritage, including movement or relocation without necessary approvals (see required procedure and refer Cultural Heritage Protocol – **Appendix E**).
- Ground disturbance or vegetation clearing beyond the boundary of the Contract's Cultural Heritage Management Agreement or Plan otherwise deemed suitable by the Administrator.
- Clearing of protected vegetation other than as authorised under an Environmental Approval.
- Identification of a new biosecurity prohibited matter or restricted matter (Category 1 or 2) on site or breach of a condition of a biosecurity zone.
- Land contamination or discovery of a contaminated site (including unexploded ordinance (UXO)).
- Incident likely to generate media interest.
- An event where the administering authority is likely to result in prosecution.
- Incidents of environmental nuisance, as defined in the EP Act, and non-conformance with the EMP and/or environmental monitoring requirements shall be reported to the Project Superintendent in the Monthly Environmental Report.

11.3 Statutory notifications

When an incident has occurred that may have caused or threatens Serious or Material Environmental Harm there is duty to notify under the EP Act. The project manager will immediately consult with the Department and confirm that the incident is to be reported to the Environmental Protection Authority. The incident should be immediately reported to the Pollution Hotline on 1300 372 842 and followed up with a written notification within 24 hours.

Statutory notifications for other incidents, such as discovery of biosecurity matter or items of historic significance, will be conducted as required in consultation with the Administrator.

11.4 Review and communication of incidents

Incidents will be reviewed to check that causal factors and root causes were identified and that the findings have been effectively addressed through assignment of action/s at project meetings.

Environmental incidents and their preventative actions/learnings will be communicated to the site team at pre-start meetings, Toolbox Talks, and through environmental alerts/bulletins as determined by investigation outcomes. High potential and major incidents will be reviewed by senior management to ensure adequacy of closeout. This EMP will be updated as necessary to reflect any actions to prevent future recurrences.

11.5 Community consultation and complaints procedure

The Customer Request Management (CRM) system captures all complaints and records associated actions. Complaints from the public about environmental impacts shall be noted in the site diary and immediately investigated by the Site Manager.

All complaints will be handled in accordance with the most recent version of DSC's Complaints Management Policy.

12.0 Monitoring and review

12.1 Practical completion period

During the period of project works the Project Superintendent and Contractor's Representative will work together to conduct regular inspections of the works. Following practical completion, a 12-month period will ensue whereby the Principal will undertake its own inspections of the works to determine any defects (a defect liability period). This can include weed germination, unforeseen emerging damage or pollution, impacts to cultural heritage, or pathogenic spread. The Principal and Project Superintendent may issue a defect notice to the Contractor team within this 12-month period. At 12 months post practical completion, a Final Completion Certificate can be issued to the Project's Contractors, at which point their responsibility to rectify defects ceases.

12.2 Review and update to the EMP

The EMP is a live document and will be regularly reviewed and revised to reflect the plan of construction and ensure that the document addresses environmental issues, changes in legislation, policies, guidelines, and work practices.

At a minimum, the EMP will be reviewed on an annual basis; notwithstanding, the EMP will be updated in the response to the following:

- changes to site conditions
- changes to procedures or processes
- changes to key personnel or resources
- changes in legal and other obligations
- findings from an audit or inspection
- identified opportunities for improved performance
- findings from a significant incident or near miss
- significant changes to the planned scope, design or construction methodology (including plant, machinery, materials, or sequence)
- consequence of a corrective action
- feedback from regulatory agencies

Any revisions to the EMP will be approved by the project manager and the updated EMP will be provided to the project manager. In addition, all construction staff will be informed of any important changes to the EMP during toolbox sessions prior to the start of the working day. A hardcopy will be always available on site where it can be viewed upon request.

12.3 Records management

The following records will be maintained at the site office, in either hardcopy or electronic format:

- Induction register
- Environmental incidents, non-conformances and complaints
- Inspection reports, checklists and diary entries
- Environmental monitoring results
- Meeting minutes
- Formal letters
- Cultural heritage activities
- Waste measurement and tracking records
- Any other record identified within the EMP

Environmental records shall be:

- Kept as objective evidence of compliance with environmental requirements
- Maintain for 7 years following practical completion
- Managed as detailed in the Integrated Management Plan

13.0 Bibliography

Australian Government (2024) Machinery cleaning guides and checklists. Available online: https://www.agriculture.gov.au/biosecurity-trade/import/goods/vehicles-machinery/regulations/guides-checklists. Accessed 16 September 2024.

Biosecurity Queensland (2019) *Vehicle and machinery clean-down procedures.* Biosecurity Queensland, Department of Agriculture and Fisheries. 29 p.

Neldner, V.J., Wilson, B.A., Dillewaard, H.A., Ryan, T.S., Butler, D.W., McDonald, W.J.F, Richter, D., Addicott, E.P. and Appelman, C.N. (2022) *Methodology for survey and mapping of regional ecosystems and vegetation communities in Queensland.* Version 6.0. Updated April 2022. Queensland Herbarium, Queensland Department of Environment and Science, Brisbane.

QPWSP (2013) Operational Policy (Natural Resource Management) – pest plant and pathogen spread prevention. 8 p.

Queensland Government (2020) Flora survey guidelines – protected plants. Available online: https://www.des.qld.gov.au/policies?a=272936:policy_registry/gl-wl-pp-flora-survey.pdf. Accessed 19 August 2024.

Queensland Government (2023) *Guideline (infrastructure and equipment) – preparing environmental management plans for Queensland Parks and Wildlife Service and Partnerships authorities.* Available online: https://www.des.qld.gov.au/policies?a=272936:policy_registry/gl-pk-ie-enviromental-management-plans.pdf. Accessed 1 August 2024.

Queensland Government (2024) Cultural heritage duty of care. Available online: https://www.qld.gov.au/firstnations/environment-land-use-native-title/cultural-heritage/cultural-heritage-duty-of-care. Accessed 16 September 2024.

Appendix A Incident/corrective action report template

Environment Incident Report Form	Date:
SECTION 1 – Incident Details	
Project Name / Site Name:	
Location (road name, number and chainage or GPS or property description or address)	
Report completed by Name, Position	
Signature:	
Contact Phone Number	
Contracting Company	
Date / Time Occurred:	**Date / Time Identified:**
Has the Contractor already reported this incident to the Administrating Authority?	☐ **YES** ☐ **NO**
Has an infringement notice or warning been received from an Administrating Authority?	☐ **YES** from Reference No. ☐ **NO**
Has a complaint been received regarding the Incident?	☐ **YES** ☐ **NO**
SECTION 2 – Incident Description (Attach photos or reports or evidence where possible)	
Where? *(Location within the project site)* **What occurred?** *(For example, 300 m² was cleared by the contractor which was outside of the limits specified in the contract)* **What was impacted or potentially could have been impacted?** *(For example, the area cleared had not been assessed for potential cultural heritage harm. The vegetation wrongly cleared was regional ecosystem 11.4.5 and was considered to be in good condition with minimal disturbance. The vegetation was listed under the EPBC Act.)*	

What are potential on-going impacts from the incident? *(For example, the soils are dispersive and have high erosion potential and this was the habitat for the endangered BullTree Butterfly).* **What was the scale of the incident?** *(For example, 300 m² cleared over 500 m of road reserve. This represents 30% of the RE in the immediate area > 10 km radius).* **Temporary controls implemented?** **Other Comments?**	

SECTION 3 – Immediate Corrective Action and Remediation

Responsible Officer(s)		**Date actions completed by**	
The actions should reduce or eliminate the direct and indirect impacts of the incident.	***Immediate actions and controls implemented.***		

SECTION 4 – Administrator Deemed Suitability for Course of Action

☐ **Deemed Suitable** for implementation

☐ **Deemed Suitable WITH FOLLOWING CHANGES** to recommendations Click here to enter text.

☐ **Not Deemed Suitable** for following reasons: Click here to enter text.

Name and Position:	**Signature:**	**Date:**

Appendix B Environmental checklist

Reporting Requirement	Results (Acceptable, Not Acceptable, *NA Not* Applicable, *NC* Not Checked)	Notes from Contractor
Monitoring		
Is housekeeping acceptable?		
All signage clear displayed (e.g. environment & safety notices, development assessment signage, etc.).		
All visitors and employees inducted to environmental aspects of the site.		
All permits and approvals in place.		
Permit and approval hard copies present at activity site and considered in risk assessments.		
ESCP revision is up to date, and reflects the controls installed on site.		
EMP is up to date and reflects current site conditions.		
No evidence of unapproved work occurring outside of normal construction hours (0630-1830hrs).		
Erosion and Sediment Control		
Public roadways clear of sediment.		
Appropriate drainage and sediment controls have been installed prior to new areas being cleared or disturbed.		
Up-slope "clean" water is being appropriately diverted through/around the site in a non-erosive manner.		
Drainage lines are free of soil scour and sediment deposition.		
No areas of exposed soil are in need of erosion control.		
Earth batters are free of "rill" erosion.		
Erosion control mulch is not being displaced by wind or water.		

Reporting Requirement	Results (Acceptable, Not Acceptable, *NA Not* Applicable, *NC* Not Checked)	Notes from Contractor
Long-term soil stockpiles are protected from wind, rain and stormwater flow with appropriate drainage and erosion controls.		
Sediment fences are free from damage.		
Sediment-laden stormwater is not simply flowing "around" the sediment fences or other sediment traps.		
Sediment controls placed up-slope/around stormwater inlets are appropriate for the type of inlet structure.		
Site dust is being adequately controlled.		
All sediment traps are free of excessive sediment deposition.		
The settled sediment layer within a sediment basin is clearly visible through the supernatant prior to discharge such water.		
All reasonable and practicable measures are being taken to control sediment runoff from the site.		
All soil surfaces are being appropriately prepared (i.e. pH, nutrients, roughness and density) prior to revegetation.		
The site is adequately prepared for imminent/potential storms.		
The construction site is clear of litter and unconfined rubbish.		
All ESC measures are in proper working order.		
Visual Inspection to ensure control structures installed as per ESCP.		
Visual Inspection to ensure control structures have not less than 70% max capacity		
Visual check Clearing/Earthworks contained to correct work area.		
Topsoil stockpiles located at least 30m from any drainage line; ESC controls in place.		

Reporting Requirement	Results (Acceptable, Not Acceptable, *NA Not* Applicable, *NC* Not Checked)	Notes from Contractor
Plant and machinery movement limited to designated side-tracks, within boundaries.		
Visual check that drainage paths are kept clear.		
Superintendent notified of upcoming clearing and grubbing activities.		
All tradespeople working on the site have been informed of the erosion and sediment control requirements of the site.		
The work site and all erosion and sediment control measures do not represent a safety risk to tradespeople or the public.		
Adequate stockpiles of emergency ESC materials exist on site.		
Turfing on the footpath area is clear of sediment, sand and mud.		
Entry/exit pads are clear of excessive sediment deposition.		
Entry/exit pads have adequate available void spacing to trap sediment.		
Stormwater flow down exposed earth batters has not caused erosion.		
Appropriate sediment controls have been placed adjacent to, or around, stormwater inlets.		
Finished service trenches have been appropriately backfilled, compacted and stabilised.		
Temporary downpipes have been correctly connected to any installed roof gutters.		
Trucks carrying loose material entering or leaving site.		
Sediment basins appropriately flocculated.		
Water Quality		

Reporting Requirement	Results (Acceptable, Not Acceptable, *NA Not* Applicable, *NC* Not Checked)	Notes from Contractor
Visual check that fuels, chemicals stored correctly.		
Visual check of waterbodies for obvious changes in water quality (e.g. oil films, colour, clarity).		
Water Quality Monitoring conducted if any flow in site waterways.		
Water quality meter is calibrated.		
Native Flora		
Visual check that completed areas have been landscaped.		
No clearing or damage to any vegetation outside clearing boundary/permit requirements.		
Visual check to ensure tree protection measures installed correctly.		
Native Fauna		
Visual check of all excavations and penetrations for trapped fauna.		
Reinstated natural hollows or nesting boxes installed correctly and still in place.		
Site-wide fauna assessment conducted.		
Fauna siting register maintained.		
Fauna spotter scheduled for upcoming clearing activities.		
Pest Management		
Visual check of site for evidence of weeds or pest animals.		
Visual check of all stockpiles for evidence of weed infestation.		
Visual check that plant and machinery entering site have been washed down prior to arrival.		
Pest Hygiene Declarations submitted.		

Reporting Requirement	Results (Acceptable, Not Acceptable, *NA Not* Applicable, *NC* Not Checked)	Notes from Contractor
No evidence of tramp ants (Yellow Crazy, Electric, or Red Imported Fire Ant).		
Noise and Vibration		
Visual check that equipment used on site is in good working order.		
Noise and vibration levels around site are acceptable.		
Visual check that all noise mitigation barricades are installed correctly.		
Air Quality		
Visual check that water cart in use to control dust generation.		
Visual Check that dust generation is not excessive.		
Visual check that plant and vehicles in good working order; emissions are not excessive.		
Dust emissions are under control.		
No smoke emissions being generated from site activities.		
Waste Management		
Visual check that waste and rubbish being disposed of appropriately.		
Visual check of surrounding area for signs of escaped rubbish and waste.		
Visual check that storage capacity of waste containers has not been exceeded (bins, sewage, etc.).		
Visual check that portable toilets are bunded.		
Visual check that wash down facility is appropriately desilted.		
Concrete washout bays are available and being utilised appropriately.		
Storage and Handling of Hydrocarbons and Chemicals		

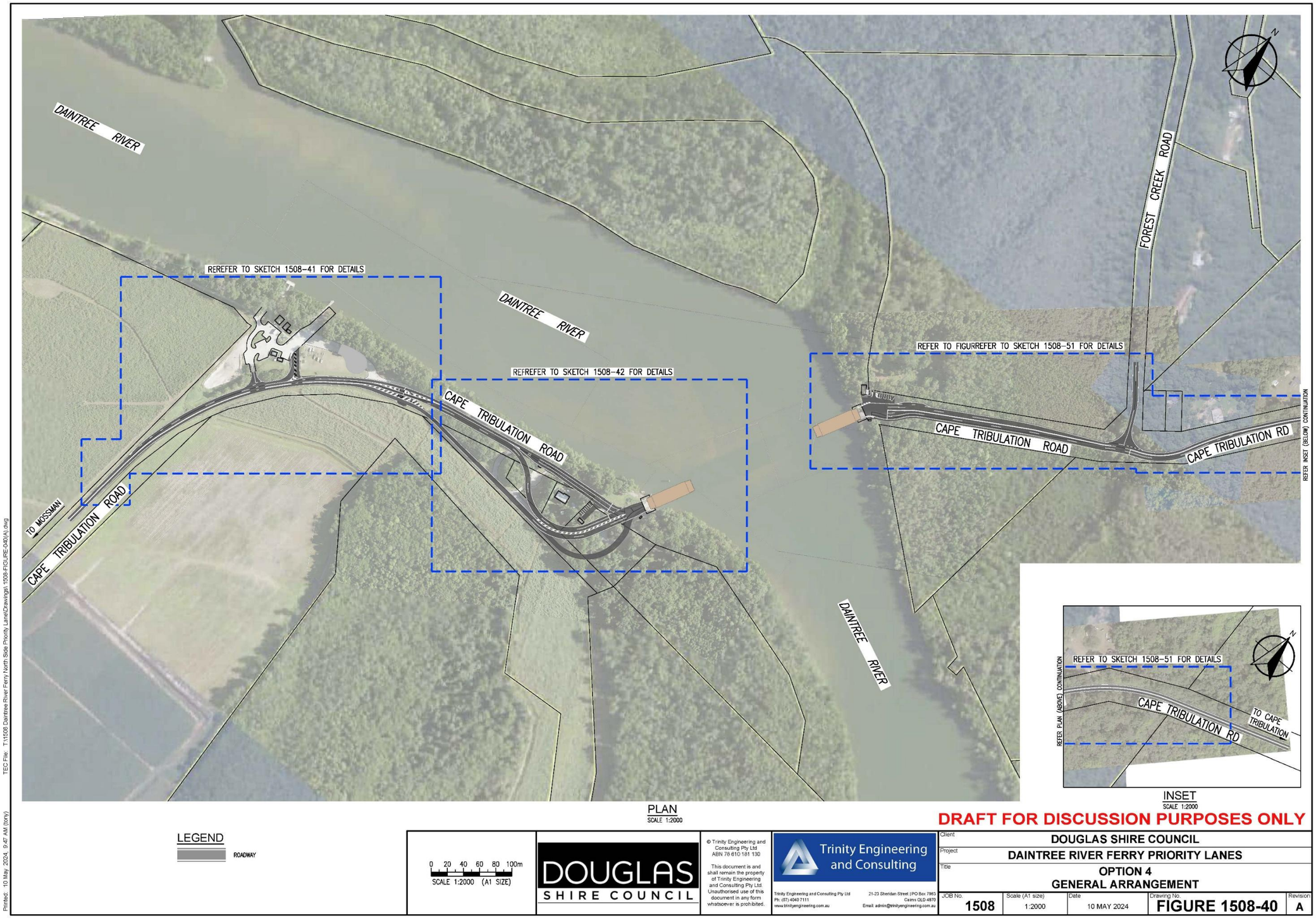
Reporting Requirement	Results (Acceptable, Not Acceptable, *NA Not* Applicable, *NC* Not Checked)	Notes from Contractor
Visual check that all fuel tanks adequately bunded and stored in appropriate containers.		
Visual check that site is free from contamination from spillage of oil/fuel after maintenance of equipment.		
No unreported spillages or contamination.		
All liquid hazardous substances appropriately bunded.		
Refuelling activities occurring at least 30 metres away from watercourses.		
MSDS are available on site.		
Acid Sulphate and Contaminated Soils		
Visual check for any unexplained scalding, degradation or death of vegetation.		
Visual check for any unexplained death or disease in aquatic organisms.		
Visual check for rust-coloured deposits on plants and on banks of drains, water bodies & water courses.		
Visual check for any signs of contamination of excavated or surface materials.		
Cultural Heritage		
All project staff have attended a DETSI Cultural Heritage induction. All staff understand Cultural Monitoring requirements/protocols.		
Supervisors have attended a Cultural Heritage Induction specific to the Traditional Owner groups.		
All High Impact Activities (as defined in the CMA) are assessed under the Cultural Heritage Protocol.		

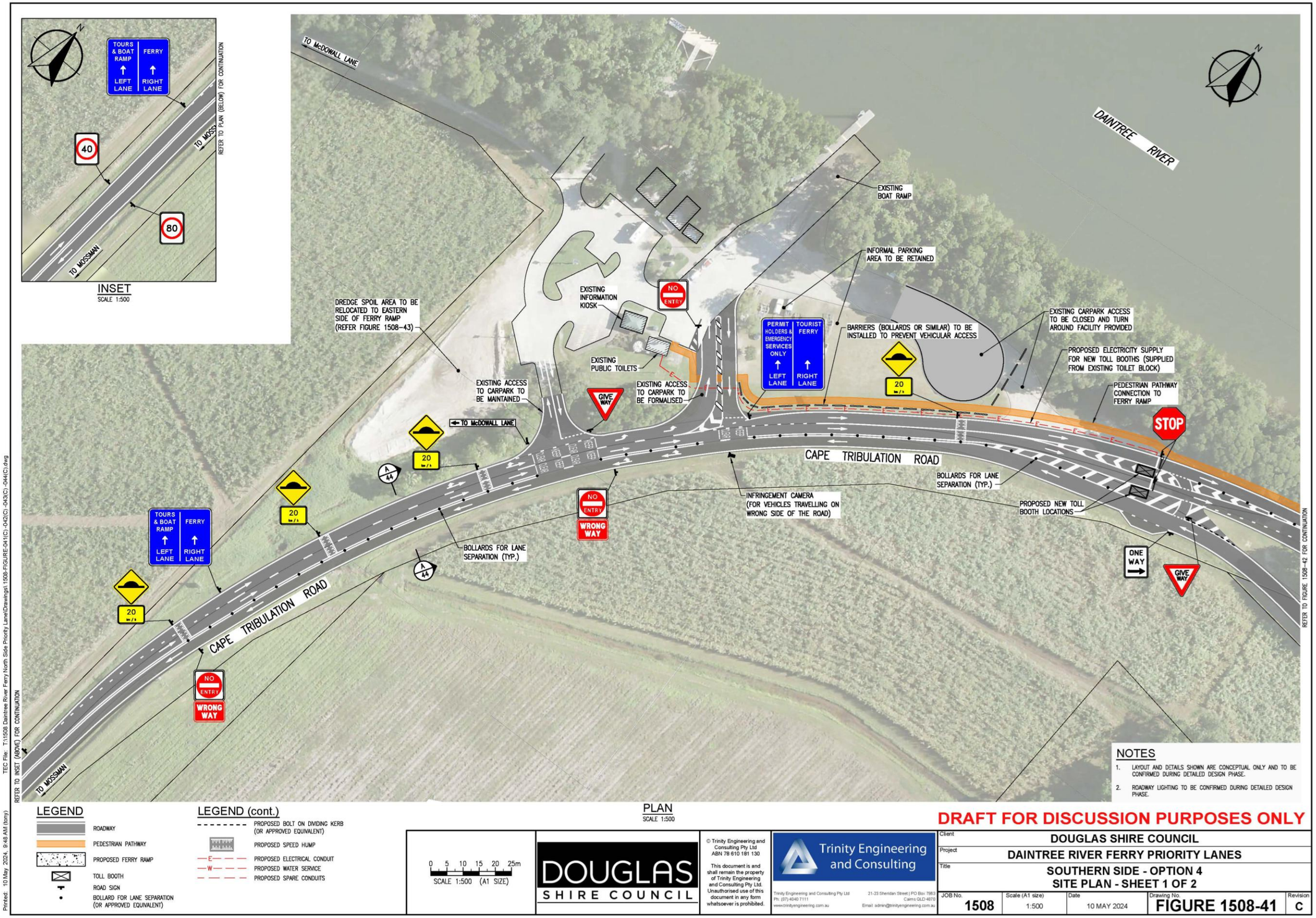
Reporting Requirement	Results (Acceptable, Not Acceptable, *NA Not* Applicable, *NC* Not Checked)	Notes from Contractor
Provide a Cultural Heritage Management Plan to outline exclusion zones of known sites of significance in line with the Cultural Heritage Protocol and Queensland Aboriginal Cultural Heritage Act 2003. Exclusion zones are clearly marked onsite prior to commencement of works.		
Vehicular movement, transport, activities and materials usage must follow the Cultural Heritage Management Plan with a clear understanding of High Impact Activities.		
Visual check for evidence of previously unrecorded cultural heritage items or sites.		
Ensure Cultural Heritage Monitor records are copied and kept on site, and originals forwarded to Client.		
Bush Fire Management		
Bushfire risk areas identified and management controls in place (e.g. fire break).		
Weekly Inspection Checklist Completed by:	**Signature:**	**Date:**
Name:		

Appendix C Acknowledgement of accountabilities and responsibilities

Position	Name	Signature	Date

Appendix C Full engineering drawings of proposed footprint





INSET
SCALE 1:500

PLAN
SCALE 1:500

NOTES
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LEGEND
- ROADWAY
- PEDESTRIAN PATHWAY
- PROPOSED FERRY RAMP
- TOLL BOOTH
- ROAD SIGN
- BOLLARD FOR LANE SEPARATION (OR APPROVED EQUIVALENT)

LEGEND (cont.)
- PROPOSED BOLT ON DIVIDING KERB (OR APPROVED EQUIVALENT)
- PROPOSED SPEED HUMP
- —E— PROPOSED ELECTRICAL CONDUIT
- —W— PROPOSED WATER SERVICE
- PROPOSED SPARE CONDUITS

0 5 10 15 20 25m
SCALE 1:500 (A1 SIZE)

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Client	DOUGLAS SHIRE COUNCIL
Project	DAINTREE RIVER FERRY PRIORITY LANES
Title	SOUTHERN SIDE - OPTION 4 SITE PLAN - SHEET 1 OF 2

JOB No.	Scale (A1 size)	Date	Drawing No.	Revision
1508	1:500	10 MAY 2024	FIGURE 1508-41	C

TEC File: T:\1508 Daintree River Ferry North Side Priority Lane\Drawings\1508-FIGURE-041(C) -042(C) -043(C) -044(C).dwg
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PEDESTRIAN PATHWAY CONNECTION TO FERRY RAMP

LEFT LANE (PERMIT HOLDERS AND EMERGENCY SERVICES VEHICLES)

MIDDLE LANE (TOURIST)

RIGHT LANE (TOURIST)

WAIT TIME FOR FERRY FROM HERE IS APPROX. 30 mins

PERMIT HOLDERS & EMERGENCY SERVICES ONLY ↑ LEFT LANE | TOURIST FERRY ↗ MIDDLE LANE | TOURIST FERRY ↗ RIGHT LANE

CAPE TRIBULATION ROAD

BOLLARDS FOR LANE SEPARATION (TYP.)

PEDESTRIAN PATHWAY CONNECTION TO FERRY RAMP

PERMIT HOLDERS ↑ LEFT LANE | PERMIT HOLDERS ↑ MIDDLE LANE | EMERGENCY SERVICES ONLY ↑ RIGHT LANE

DAINTREE RIVER

EXISTING TOLL BOOTH TO BE REPLACED WITH 2 TOLL BOOTHS APPROX. 200m TO THE WEST

WAIT TIME FOR FERRY FROM HERE IS APPROX. 15 mins

3.7m (12ft) MERGE LANE

LEFT LANE (PERMIT HOLDERS)

MIDDLE LANE (PERMIT HOLDERS)

RIGHT LANE (EMERGENCY SERVICES VEHICLES)

EXISTING HOUSE

COUNCIL / CONTRACTOR CARPARKING

HYDRAULIC CABLE DRUM REEL

BUS SHELTER

FERRY

NEW BORE AND POTABLE WATER STORAGE TANKS

EXISTING PUBLIC TOILET

REFER TO DETAIL 1 ON FIGURE 1508-43

FORM 1 LANE ZIP MERGE

KEEP LEFT

TO MOSSMAN, PORT DOUGLAS, CAIRNS ↑ EXIT | ↑ EXIT

2 x TOURIST LANES

750m (2 EXIT LANES)

EXISTING BITUMEN ROAD TO BE ABANDONED

REFER TO FIGURE 1508-41 FOR CONTINUATION

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- PEDESTRIAN PATHWAY
- PROPOSED FERRY RAMP
- TOLL BOOTH
- ROAD SIGN
- BOLLARD FOR LANE SEPARATION (OR APPROVED EQUIVALENT)

LEGEND (cont.)

- PROPOSED BOLT ON DIVIDING KERB (OR APPROVED EQUIVALENT)
- PROPOSED SPEED HUMP
- PROPOSED ELECTRICAL CONDUIT
- PROPOSED WATER SERVICE
- PROPOSED SPARE CONDUITS

PLAN
SCALE 1:500

0 5 10 15 20 25m
SCALE 1:500 (A1 SIZE)

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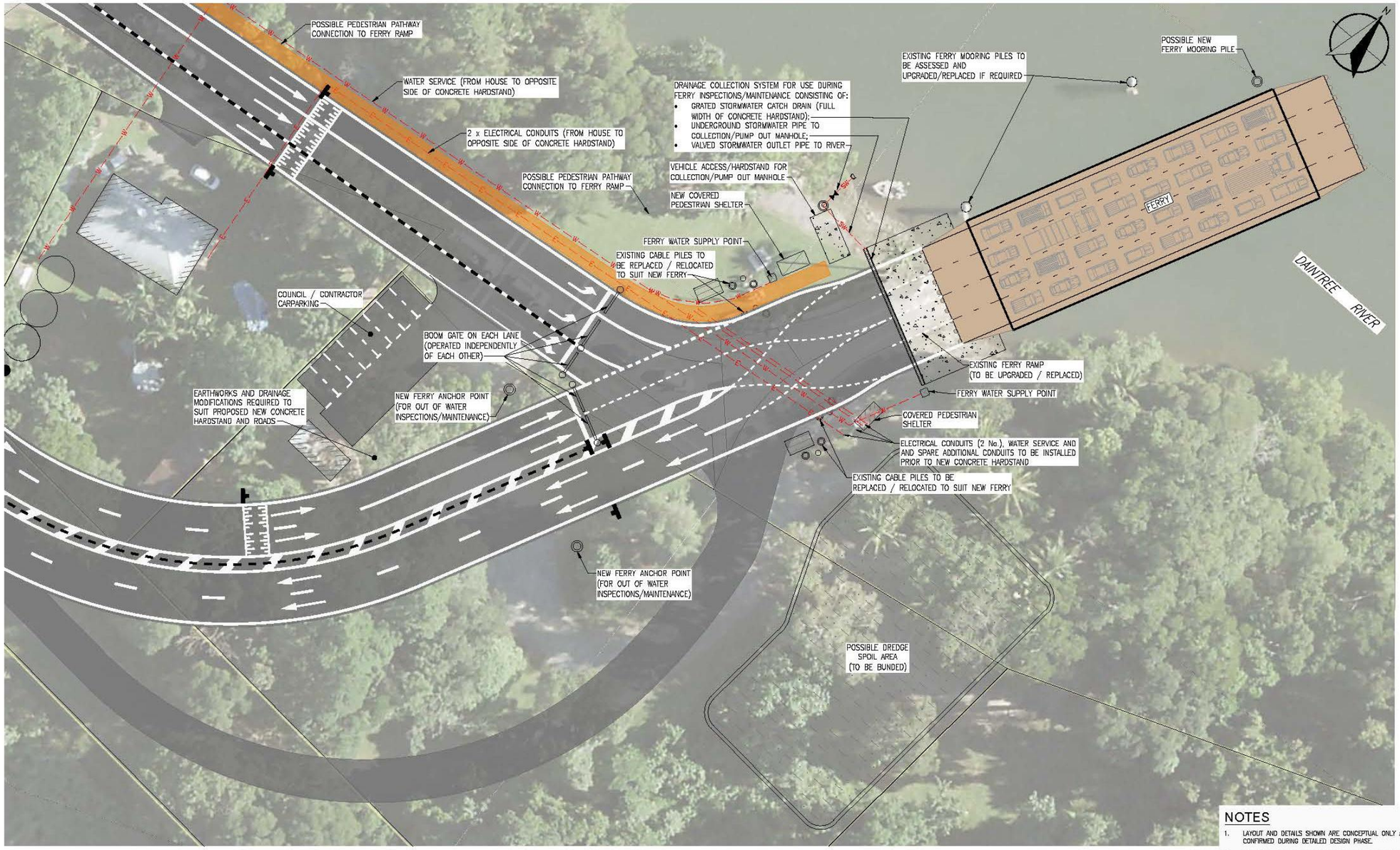
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Client	DOUGLAS SHIRE COUNCIL
Project	DAINTREE RIVER FERRY PRIORITY LANES
Title	SOUTHERN SIDE - OPTION 4 SITE PLAN - SHEET 2 OF 2

JOB No.	Scale (A1 size)	Date	Drawing No.	Revision
1508	1:500	10 MAY 2024	FIGURE 1508-42	C



DETAIL 1/42
SCALE 1:250

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LEGEND

- ROADWAY
- PEDESTRIAN PATHWAY
- PROPOSED FERRY RAMP
- TOLL BOOTH
- ROAD SIGN
- BOLLARD FOR LANE SEPARATION (OR APPROVED EQUIVALENT)

LEGEND (cont.)

- PROPOSED BOLT ON DIVIDING KERB (OR APPROVED EQUIVALENT)
- PROPOSED SPEED HUMP
- PROPOSED ELECTRICAL CONDUIT
- PROPOSED WATER SERVICE
- PROPOSED SPARE CONDUITS

0 2.5 5 7.5 10 12.5m
SCALE 1:250 (A1 SIZE)

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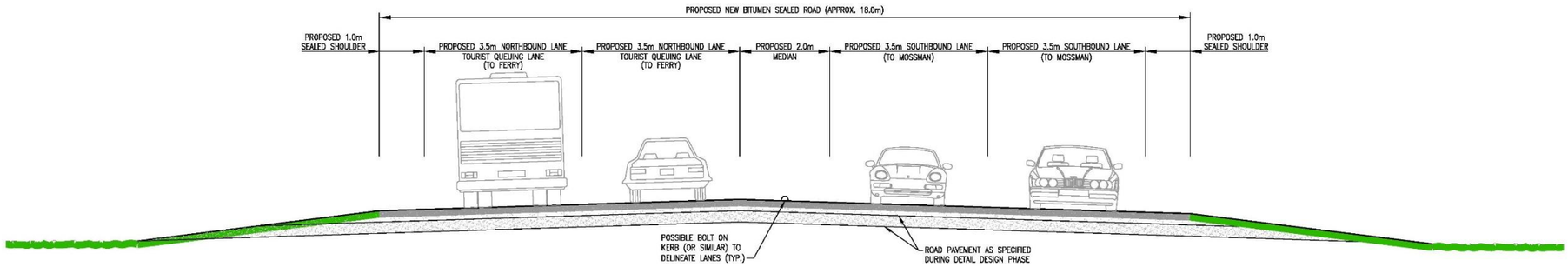
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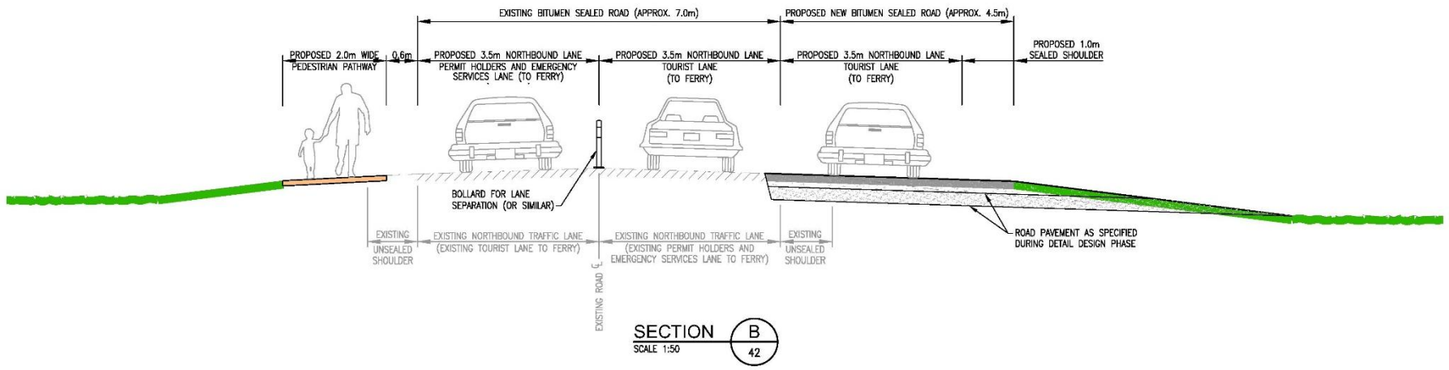
Client	DOUGLAS SHIRE COUNCIL
Project	DAINTREE RIVER FERRY PRIORITY LANES
Title	SOUTHERN SIDE - OPTION 4 LOADING AND UNLOADING AREA

JOB No.	Scale (A1 size)	Date	Drawing No.	Revision
1508	AS SHOWN	10 MAY 2024	FIGURE 1508-43	C

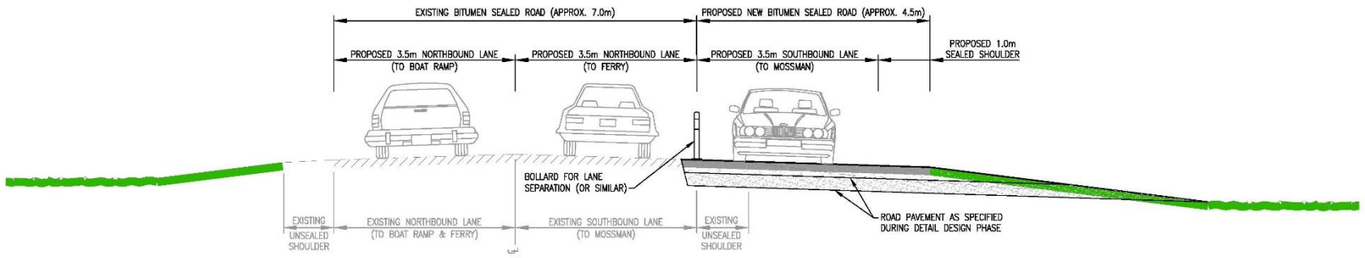
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SECTION C
SCALE 1:50
42



SECTION B
SCALE 1:50
42



SECTION A
SCALE 1:50
41

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0 0.5 1 1.5 2 2.5m
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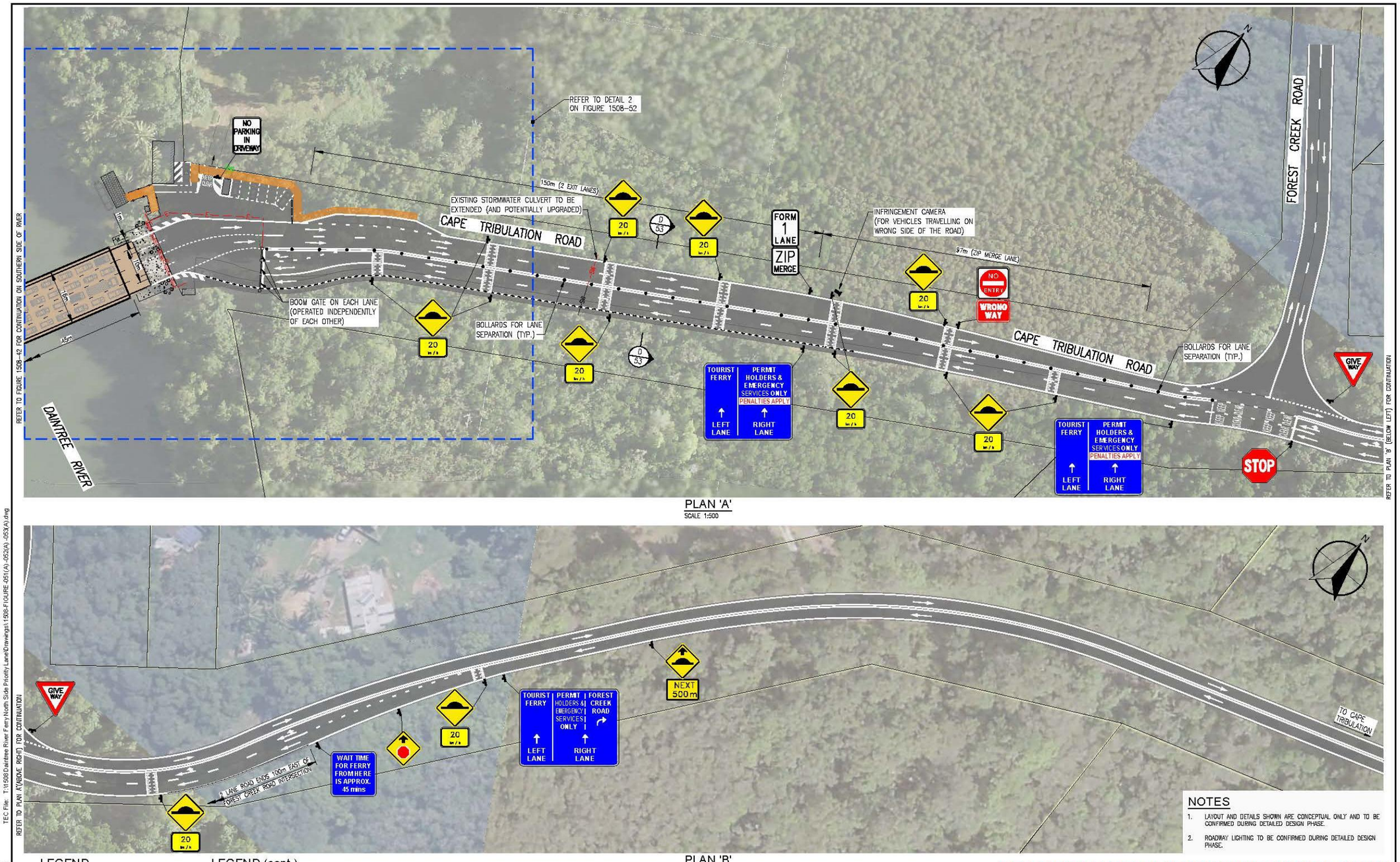
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Client	DOUGLAS SHIRE COUNCIL
Project	DAINTREE RIVER FERRY PRIORITY LANES
Title	SOUTHERN SIDE - OPTION 4 TYPICAL SECTIONS

JOB No.	Scale (A1 size)	Date	Drawing No.	Revision
1508	1:50	10 MAY 2024	FIGURE 1508-44	B

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- BOLLARD FOR LANE SEPARATION (OR APPROVED EQUIVALENT)

LEGEND (cont.)

- PROPOSED BOLT ON DIVIDING KERB (OR APPROVED EQUIVALENT)
- PROPOSED SPEED HUMP
- PROPOSED ELECTRICAL CONDUIT
- PROPOSED WATER SERVICE
- PROPOSED SPARE CONDUITS

0 5 10 15 20 25m
SCALE 1:500 (A1 SIZE)

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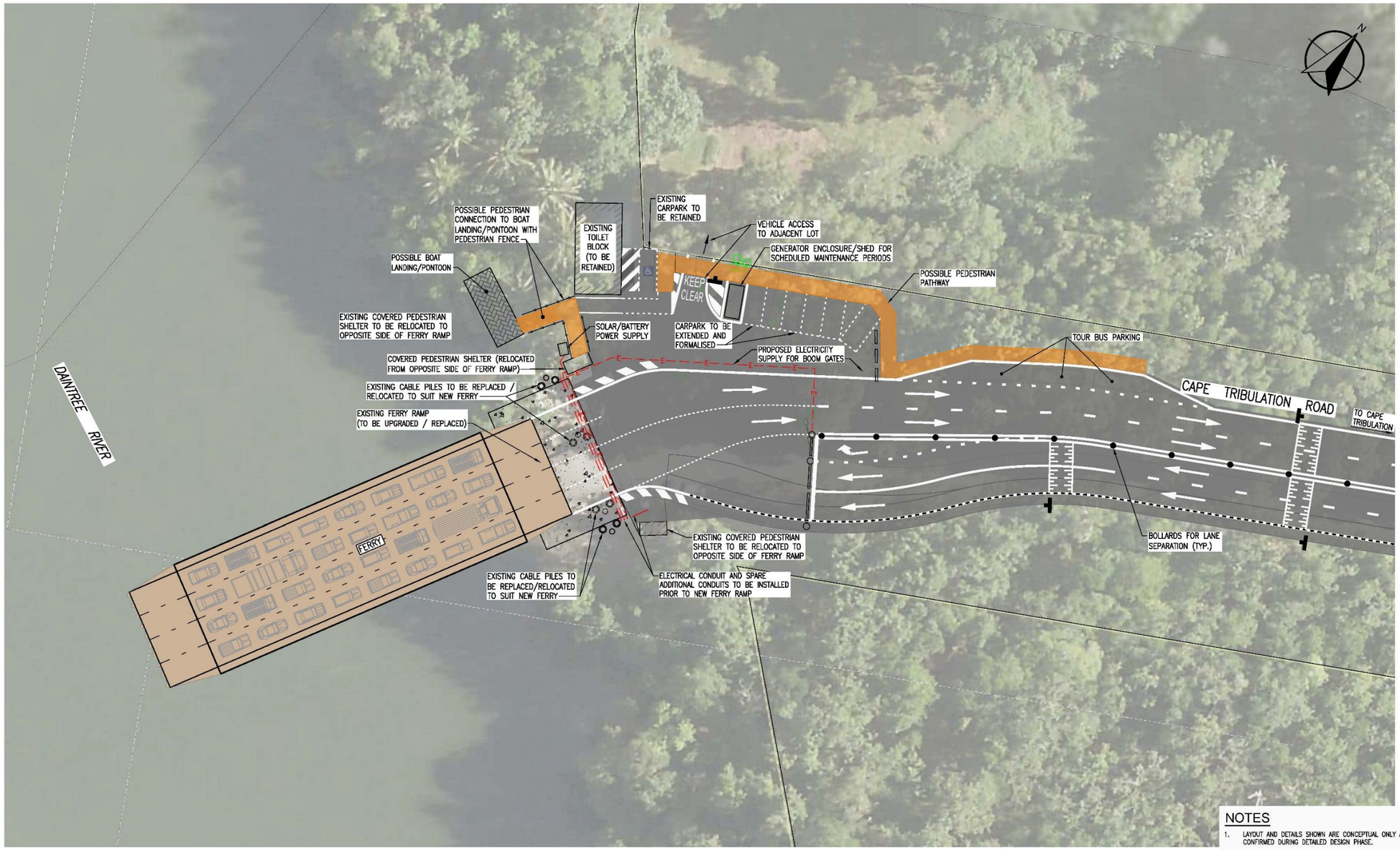
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Client	DOUGLAS SHIRE COUNCIL
Project	DAINTREE RIVER FERRY PRIORITY LANES
Title	NORTHERN SIDE - OPTION 4 SITE PLAN

JOB No.	Scale (A1 size)	Date	Drawing No.	Revision
1508	1:500	10 MAY 2024	FIGURE 1508-51	A

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DETAIL 2/51
SCALE 1:250

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- PROPOSED ELECTRICAL CONDUIT
- PROPOSED WATER SERVICE
- PROPOSED SPARE CONDUITS

0 2.5 5 7.5 10 12.5m
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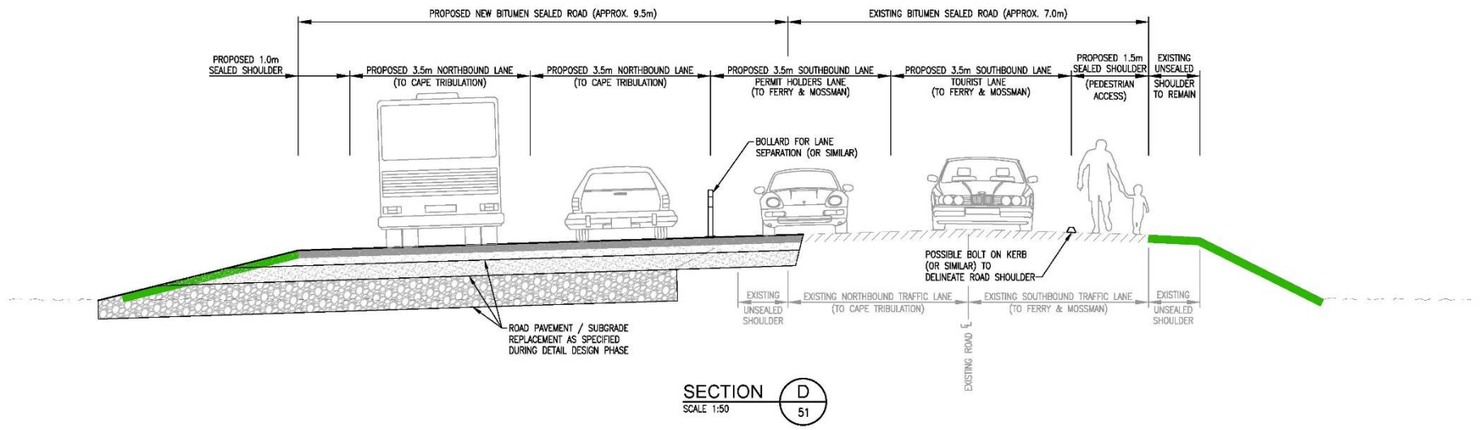
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Project	DAINTREE RIVER FERRY PRIORITY LANES
Title	NORTHERN SIDE - OPTION 4 LOADING AND UNLOADING AREA

JOB No.	Scale (A1 size)	Date	Drawing No.	Revision
1508	AS SHOWN	10 MAY 2024	FIGURE 1508-52	A

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SECTION D
SCALE 1:50
51

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0 0.5 1 1.5 2 2.5m
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Client	DOUGLAS SHIRE COUNCIL
Project	DAINTREE RIVER FERRY PRIORITY LANES
Title	NORTHERN SIDE - OPTION 4 TYPICAL SECTIONS

JOB No.	Scale (A1 size)	Date	Drawing No.	Revision
1508	1:50	10 MAY 2024	FIGURE 1508-53	A

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Appendix L

A Protected Plant Survey, dated August 2024, prepared by 4 Elements.



Protected Plant Survey

Douglas Shire Ferry Terminal duplication

August 2024

4 elements

Protected Plant Survey

Douglas Shire Ferry Terminal duplication

August 2024

Revision History – Doc # R2024-243

Version	Purpose	Issued by	Date	Reviewer	Date
0.1	Draft	Dr Mark Nadir Runkovski	18/07/2024	Ryan Hughes	16/08/2024
1.0	Final	Dr Mark Nadir Runkovski	16/08/2024	Robert Latham	16/08/2024

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1.0 Introduction

Four Elements Consulting was contracted by Douglas Shire Council to undertake a Protected Plant Survey (PPS) for a proposal which seeks to increase capacity of the existing Daintree River Ferry terminal. The proposal is located approximately 50 km north of the town of Port Douglas on the Daintree River (**Figure 1**). As part of this concept design proposal (see **Figure 2**), vegetation clearing within a mapped High Risk Trigger area is required to establish the following:

Communication with Douglas Shire Council (Robert Latham, pers. comm. 17 July 2024) provided detail on the specific proposed clearing and related works, which is:

Southern side of Daintree River

- Widening of the current alignment of Cape Tribulation Road upon approach of pull-off to Solar Whisper Wildlife Cruises by one (1) lane to the northwest (**Figure 2**, Part A)
- Widening of the current alignment of Cape Tribulation Road after the pull-off to Solar Whisper Wildlife Cruises by one (1) lane to the northwest to account for installation of a ticketing office/checkpoint (**Figure 2**, Part B)
- Installation of additional four to six (4-6) lanes to the centre of the current alignment of Cape Tribulation Road upon approach to the ferry to allow for separation of visitor boarding and exiting lanes from locals/permit-holders boarding and exiting lanes (**Figure 2**, Part C)
- Dredging area to address new future wider vessel and partitioning of a storage area for dredged material including for testing and reallocation. The storage area is designated within a set-down area previously cleared to the southeast of the alignment (**Figure 2**, Part D)

Northern side of Daintree River

- Widening of Cape Tribulation Road to the northwest of the current alignment from two (2) lanes to four (4) lanes up until the junction with Forest Creek Road (**Figure 2**, Part E)
- Widening of Cape Tribulation Road to the southwest of the current alignment from two (2) lanes to four (4) lanes after the junction with Forest Creek Road (**Figure 2**, Part F)

A Protected Plant Survey (PPS) was conducted as per the Flora Survey Guidelines – Protected Plants (Queensland Government, 2020) (the Guidelines) by two (2) 4 Elements botanists, Ryan Hughes and Dr Mark Nadir Runkovski over two consecutive days (Monday 8 and Tuesday 9 July 2024). Protected plants as defined under the Queensland *Nature Conservation (Plants) Regulation 2020* (the Regulation); a subsidiary of the Queensland *Nature Conservation Act 1992* (the NC Act), and/or the Australian *Environment Protection and Biodiversity Conservation Act 1999* (the EPBC Act), were recorded in this survey. An Impact Management Plan (IMP) is also

required to be completed prior to applying for a Protected Plant Clearing Permit (a Permit) and is included in this report.

1.1 Project site description

The project site is seeking to add additional infrastructure to the existing Daintree River Ferry Terminal on both the southern and northern approaches. All vegetation clearance will occur on the boundary of existing cleared vegetation. A portion of the proposal requires vegetation clearance within the high-risk trigger area that is mapped as category B remnant vegetation under the Vegetation Management Act 1999. As far as practical, the alignment is located within category X Non-remnant or category R High Value Reef Regrowth.

The project site is located adjacent to intensive horticultural industries, tourist and recreational infrastructure and remnant vegetation/conservation areas in the northern approach.

For the purposes of this report,

- The project site is defined as the proposed alignment.
- The clearing impact area (CIA) is the area of vegetation within 100 m of the proposed alignment.
- The locality is within ~10 km of the project site, and;
- The region is the Wet Tropics Bioregion

1.2 Protected plants

Results of this field investigation recorded six (6) protected plant species located within the clearance impact area for the proposal.

The medium sized vine forest understorey tree, *Rhodamnia sessiliflora* (iron malletwood), listed as Endangered pursuant to the NC Act, was recorded. All individuals (19) are located outside of the project site and are not proposed to be directly cleared because of the proposal. Another myrtaceous species, *Rhodomyrtus effusa* (listed as Endangered under the NC Act) was also recorded in similar habitats outside of the proposed clearance areas, but only on the north side of the alignment, while *R. sessiliflora* was found on both sides. *R. effusa* was found predominantly in ecotonal areas between REs 7.3.5a and 7.3.23a, with a total of 10 individuals at 6 different locations.

Three (3) epiphytic plant species, *Myrmecodia beccarii* (ant-plant), *Dendrobium nindii* (blue antler orchid) and *Acriopsis emarginata* (pale chandelier orchid) were recorded within mangrove forests in the northern side of the project site. *Myrmecodia beccarii* and *A. emarginata* are listed as Vulnerable pursuant to both the NC Act and the EPBC Act, while *D. nindii* is listed as Endangered under these Acts. A total of 567 *M. beccarii* were recorded and only a single *A. emarginata* was recorded, with 23 *D. nindii.* An additional species, *Randia audasii*, which is listed as Near Threatened pursuant to the NC Act was recorded at a single location on the southern side of the Daintree River. This individual is likely to be a landscape planting given that it is within a cultivated garden bed

with other local native species. This individual will be considered 'not in the wild' (as determined by Queensland Government, 2023) and will be exempt from the protected plant clearing permit application.

All vegetation clearances are reduced to the minimum extent and will be undertaken under the conditions determined under an approved IMP. These protected plant populations are to be managed as per the recommendations outlined in the IMP.

1.3 Scope of works

This PPS report will incorporate vegetation management in accordance with the Regulation which endeavours to ensure the protection of all native plants as protected plants and regulates clearing, growing, harvesting and trade of protected plants in Queensland. A PPS is required pursuant to the Regulation where a project impacts upon vegetation within a 'high risk' area, as shown on the Department of Environment, Science and Innovation (the Department) high-risk area mapping. As this project is located within a high-risk area (**Appendix C**), a PPS must be undertaken to identify any protected plants which are listed as 'Near Threatened', 'Vulnerable', 'Endangered' or 'Critically Endangered' pursuant to the Regulation (EVNT plant species). The PPS must cover the entire project site and CIA, as set out under Section 133 of the Regulation.

If any ENVT plant species are identified within the CIA, a clearing permit must be sought from the Department's Permits and Licensing Authority (PaLM).

The outline of the above workflow includes:

- desktop analysis and review of existing information to determine if the clearing is within a high-risk area
- determination of an appropriate PPS method and assimilation of any previous PPS knowledge
- undertaking of a field PPS using a Timed Meander Survey method (Cropper, 1993), carried out by a suitably qualified person (with formal training in plant identification in Queensland and >5 years' experience)
- reporting on and description of the proposed development
- provision of protection options for any restricted species identified
- provision of site-specific management and maintenance procedures where required
- survey methods

The objectives of this assessment are to:

- Review and identify EVNT plant species occurring or considered likely to occur on/or within the proposed clearing impact area;

- Identify all flora species within the clearing impact area where access is permitted/required under the Protected Plants Assessment Guidelines (2006);
- Identify likelihood of occurrence and subsequent impact for any EVNT plant species listed pursuant to the NC Act and/or EPBC Act as a result of the PPS (identifications made using the LucidMobile RFK Edition 8 – Australian Forest Plants app for smart phones, as well as the James Cook University Australian Tropical Herbarium Orchids key (https://www.anbg.gov.au/cpbr/cd-keys/RFKOrchids/key/rfkorchids/Media/Html/index.htm). Any unknown plants were sent to the Australian Tropical Herbarium for confirmation of identity.
- Collect data on any observed occurrence of EVNT plant species including size, age, and location (using a handheld GPS device);
- Ground truth all regional ecosystems mapped under the Regional Ecosystem Description Database (REDD v 13.0), and as defined below:

The Queensland *Vegetation Management Act 1999* (VM Act) provides regulation of clearing of remnant vegetation in Queensland through the Regional Ecosystem vegetation classification system. Clearing is regulated in accordance with the level of significance of the vegetation communities identified under the system. Remnant vegetation of both woody and non-woody predominant strata (ecologically-dominant layer – EDL) is defined by the Queensland Government within the 'Methodology for surveying and mapping regional ecosystems and vegetation communities in Queensland: Version 7.0' (Neldner *et al.*, 2023), as:

Woody dominated vegetation

Woody vegetation is vegetation for which the predominant stratum is composed mainly of woody vegetation such as trees or shrubs. The Herbarium assesses and maps woody dominated vegetation as remnant if it meets the definition used in the VM Act, which is: 'vegetation, part of which forms the predominant canopy of the vegetation -

(a) covering more than 50% of the undisturbed predominant canopy; and

(b) averaging more than 70% of the vegetation's undisturbed height; and

(c) composed of species characteristic of the vegetation's undisturbed predominant canopy.'

Non-woody dominated vegetation

Non-woody vegetation is vegetation in which the predominant stratum is composed of grasses and / or other non-woody vegetation. Defining remnant status in non-woody dominated vegetation, such as grasslands, on the characteristics of the height and cover of the canopy—that is, the grasses and forbs—is not practical. The dominant layer in these vegetation types is highly variable according to seasonal conditions and can be rapidly modified using grazing, fire or mechanical mowing. In addition, variations in the composition and condition of the non-woody vegetation may not be readily and consistently recognised from Landsat TM imagery. Therefore, the Herbarium assesses and maps non-woody dominated vegetation as remnant if it meets the definition of

areas of non-woody dominated vegetation that can be mapped as remnant under the VM Act – 'an area of vegetation that:

(a) has not been cultivated for 15 years

(b) contains native species normally found in the regional ecosystem

(c) is not dominated by non-native perennial species.'

Regrowth vegetation

The VM Act in Queensland also recognizes High Value Regrowth (HVR) which is currently defined as native vegetation regrowth greater than 15 years old. HVR is mapped as Category R or C on the regulated vegetation map produced by the Department of Resources."

1.4 Survey Limitations

The survey was undertaken in early July 2024, which is in the early dry season for the region. Some rainfall was recorded from the Low Isles weather station (located about 25 km to the southeast of the project site) with approximately 22 mm of precipitation during the week preceding the surveys (BOM, 2024) and a further 5.7 mm during the 2 days of protected plant surveys at the site. With moderate rainfall totals recorded, this was considered an average time of survey for protected plants that are potentially occurring with the clearing impact area. Most trees, shrubs, vines, and other larger ground-cover species are detectable all year round in rainforest and mangrove communities present in the local area, with the possible exception for some small ephemeral groundcovers.

1.5 Site access

Most of the proposed clearance alignment and 100m buffer was accessible to be traversed during the PPS. An area of RE 7.3.5a to the northwest of Cape Tribulation Road could not be traversed due to freshwater inundation and the likely presence of estuarine crocodiles (*Crocodylus porosus*). A binocular search of all structural layers of the vegetation was used to search for protected plants. Protected plants #s 94, 95 and 100 (**Figure 7**) were observed in the original PPS survey from February 2023 and kept in as data points for the current report. All other wetland areas were tidal and could safely be traversed during low tide. The survey effort undertaken provides confidence that All efforts were made to search as much of the 100 m buffer of vegetation adjoining the shared path alignment as was practical.

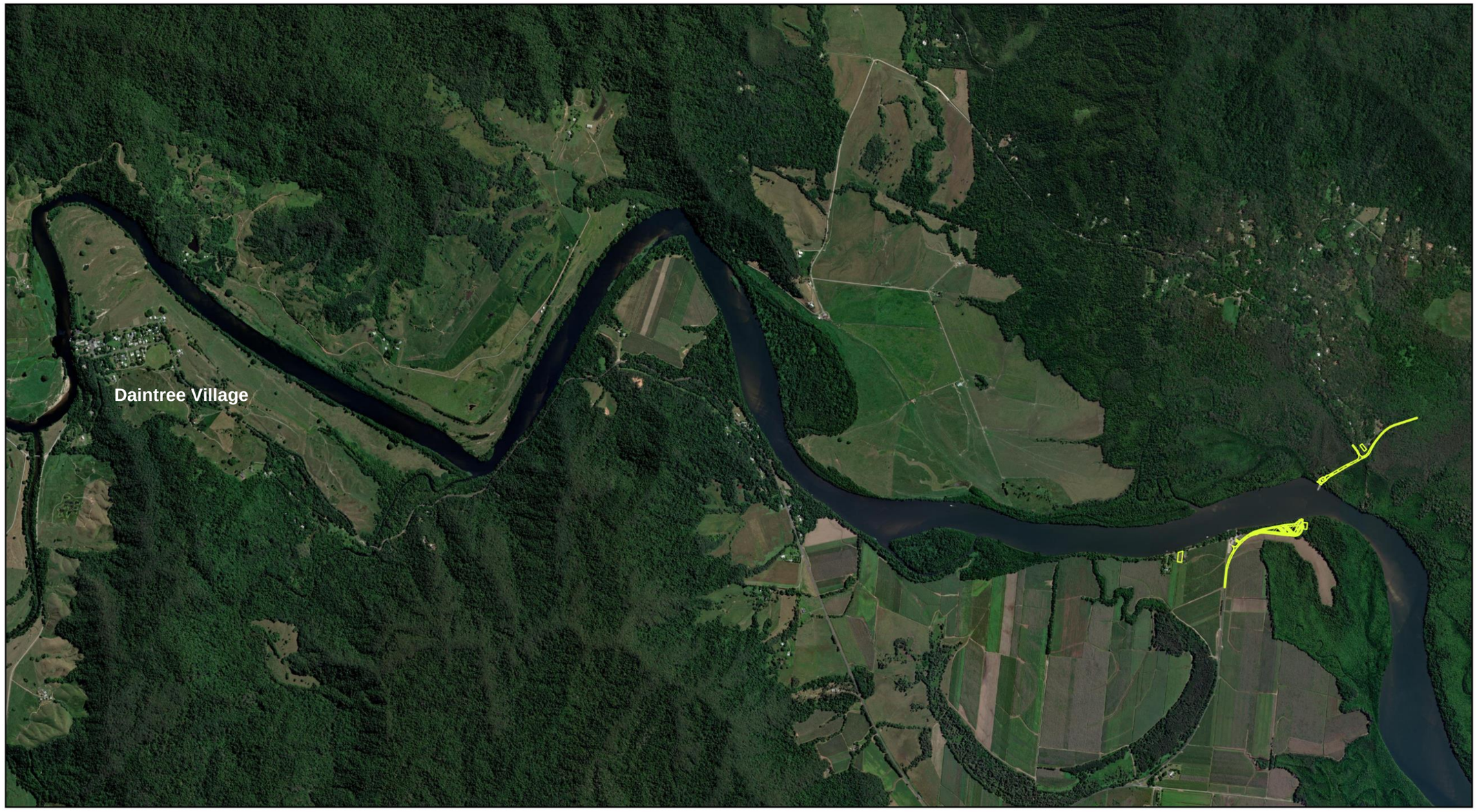


Figure 1: Location of project site

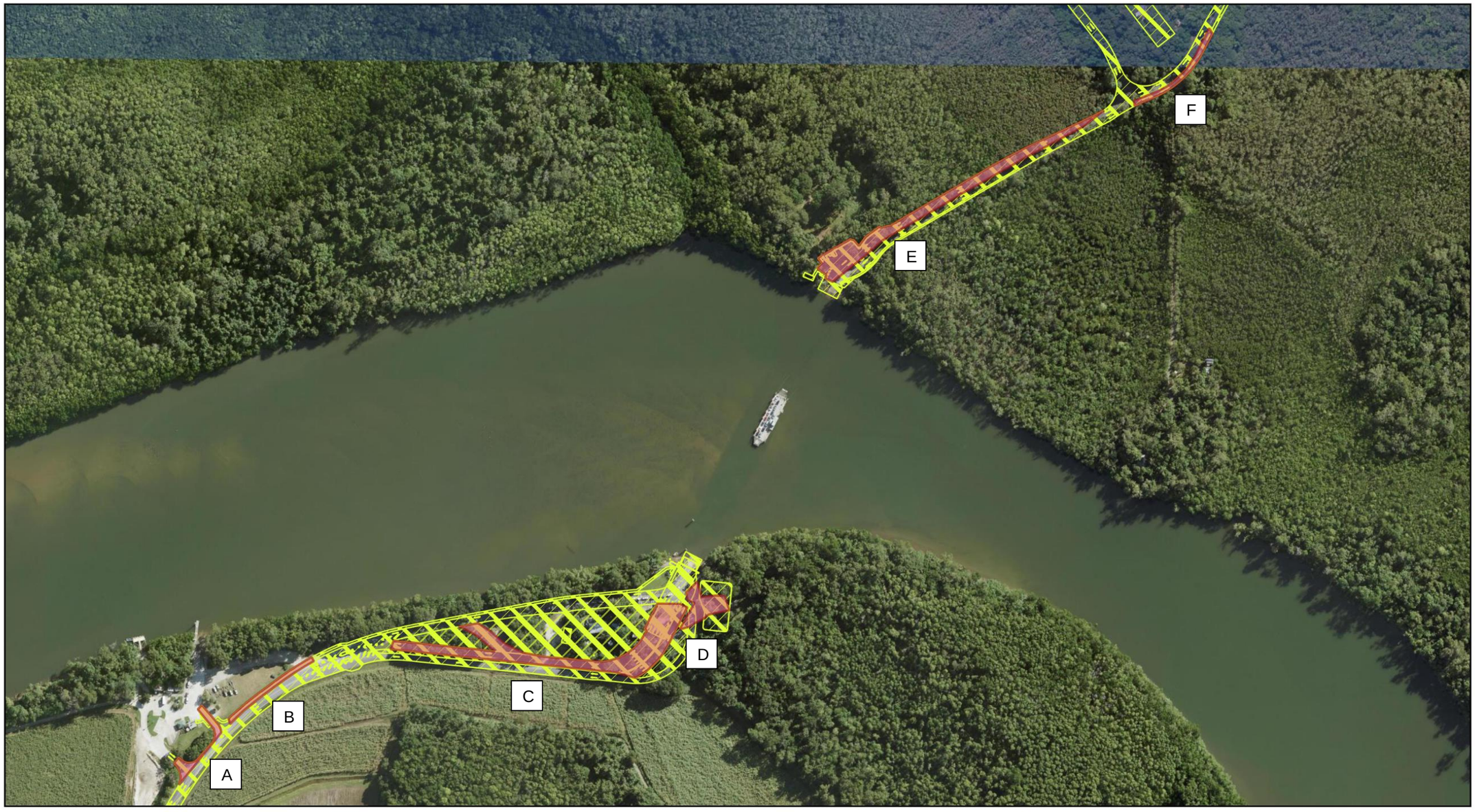


Figure 2: Project alignment within the High-risk Trigger area

2.0 Methodology

2.1 Desktop review

4 Elements Consulting completed a review of relevant mapping, databases, legislation and associated plans and policies to identify potential matters of ecological significance including species and communities, and other ecological features that may occur on, or within proximity of the project site. This review included an assessment of the following:

- Wildlife Online database of flora and fauna in Queensland (Queensland Government, 2024). This database holds records of plants and animals that have either been sighted or collected within a given radius of the site (a search parameter was prescribed limiting the search area to a 10 km radius around the site. The records held in this database are maintained by the Department;
- Protected Matters database of Matters of National Environmental Significance (MNES) (Australian Government, 2024). This database applies a range of bio-models to predict the presence of species of flora and fauna and other MNES within a given radius of the site (a search parameter was prescribed limiting the search area to a 5 km radius) as cited under the EPBC Act;
- Protected Matters database of Matters of State Environmental Significance (MSES) (Australian Government, 2024). This database applies a range of bio-models to predict the presence of species of vegetation and other MSES within a given radius of the site (a search parameter was prescribed limiting the search area to 10 km), as cited under the NC Act;
- Review of relevant legislation and associated plans and policies, including but not limited to the Queensland *NC Act 1992*, Queensland *VM Act 1999*, Australian *EPBC Act 1999*, Queensland *Water Act 2000*, Queensland *Environmental Protection Act 1994*, Queensland *Fisheries Act 1994*, Queensland *Great Barrier Reef Marine Park Act 1975*, Queensland *Coastal Protection and Management Act 1995*, and Queensland *Planning Act 2016*.
- A literature review of scientific papers, recovery and conservation plans and other literature for a number of related matters (such as targeted threatened species);
- Digital geological mapping on Queensland Globe and GeoResGlobe which details surface geology; and,
- Australian Virtual Herbarium (for voucher notes and distribution records of threatened flora species).

2.2 Field survey

The field survey was undertaken on two consecutive days on Monday 8 and Tuesday 9 July 2024. The primary aims of this investigation are explained below.

2.2.1 Timed meander survey

A single timed meander (each comprising between 5 - 9 hours) was conducted at both the north and south approach of the Daintree River Ferry by suitably qualified persons Ryan Hughes and Dr Mark Nadir Runkovski (see **Section 6.0** below). A 100 m radius of each of the planned vegetation clearance areas was searched (see **Figure 3** and **Figure 4**). The survey effort undertaken within the project site and CIA met the methodology required pursuant to the Guidelines. During timed meanders, the time is recorded approximately every 5 minutes while conducting a search for EVNT plant species. If no EVNT plant species are recorded, the search continues for 30 min or until the entire area is surveyed, whichever happens sooner. If EVNT plant species are recorded, the search must continue for at least 30 min after the last plant is recorded, or when the entire area is surveyed, whichever happens sooner.

All vascular plant species observed in this meander survey were recorded to compile a list of all species detected (see **Appendix F**). For species that could not be identified confidently in the field, a voucher specimen was collected and used for later identification. No specimens were required to be sent to the Queensland Herbarium for verification, however the protected plants, *Rhodamnia sessiliflora* and *Rhodomyrtus effusa* were sampled and sent to the Queensland Herbarium to lodge occurrence records.

2.2.2 Weed assessment

During field investigation, notes were taken of weed incursions to the project site. This included species presence as well as their distribution and abundance (see **Section 4.4** below).

2.2.3 Describing vegetation communities

All vegetation communities were recorded within the project site and CIA. All discrete vegetation communities, within the 100 m clearance impact area, were sampled. Communities were recorded utilising a Quaternary level site assessment as per CORVEG methodology to verify their classification according to Regional Ecosystem (RE) mapping version 7.0 (Neldner *et al.*, 2023).

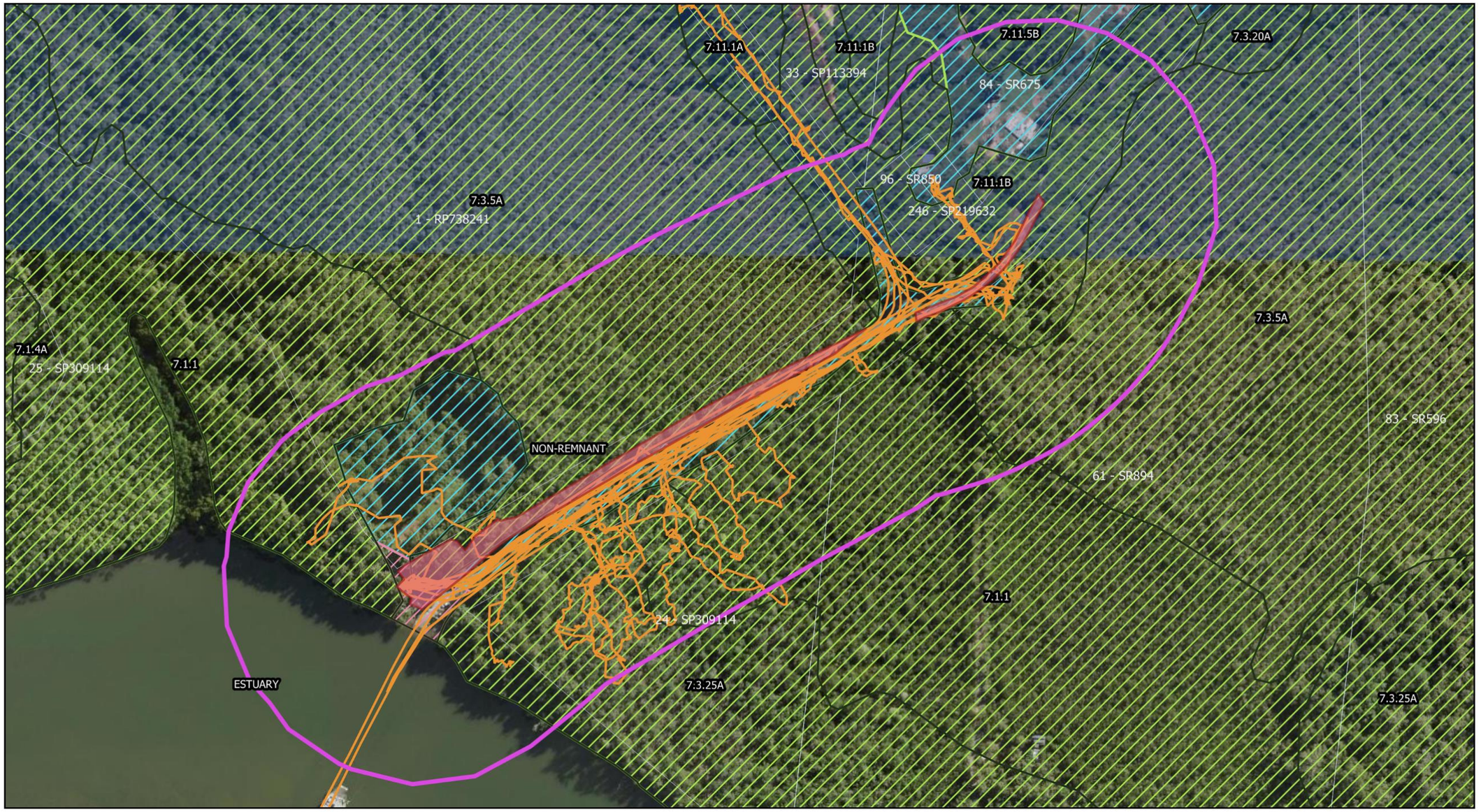


Figure 3: Northern project alignment protected plant survey meander

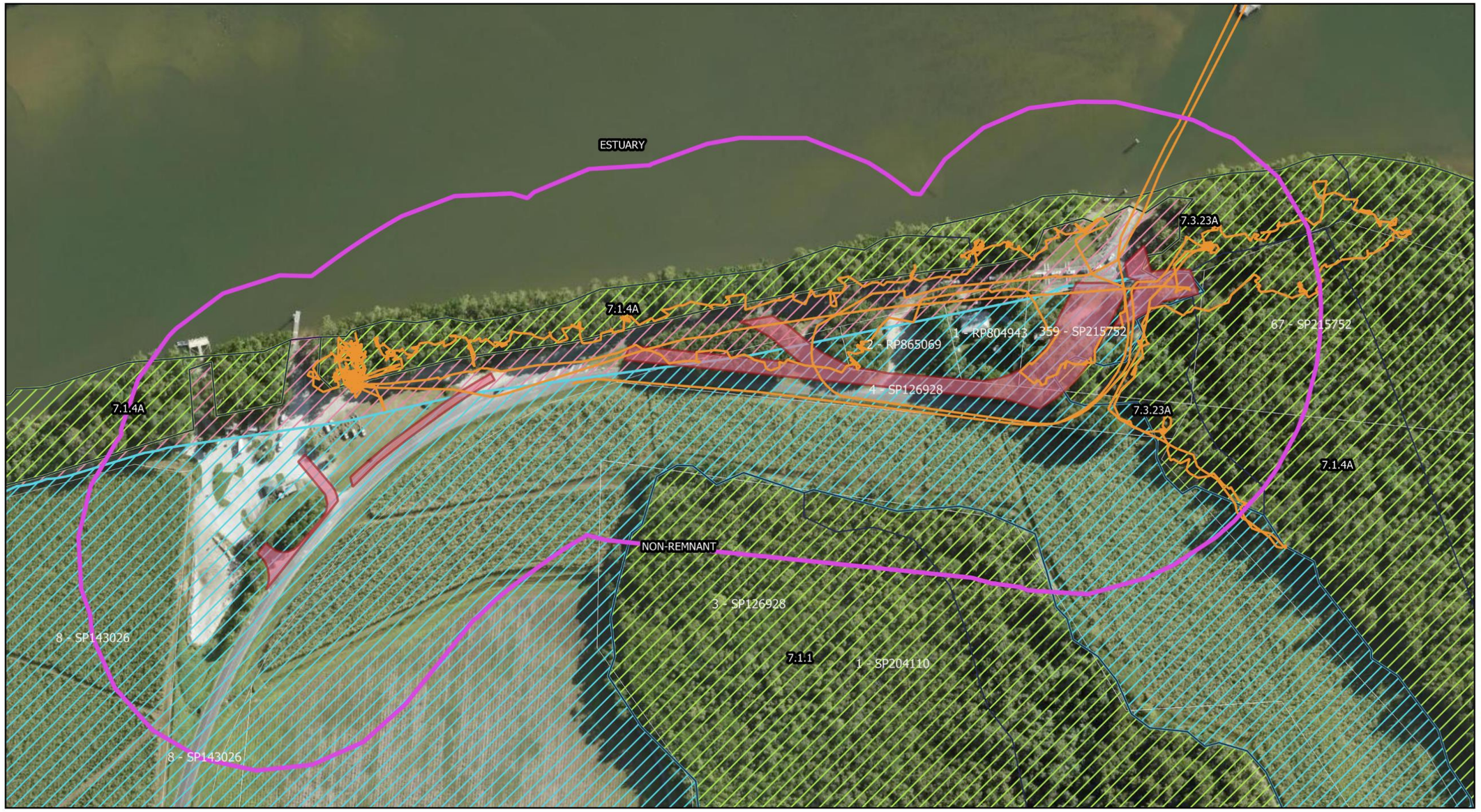


Figure 4: Southern project alignment protected plant survey meander

3.0 Results - desktop analysis

3.1 EPBC and NCA database search

Desktop searches were made of the EPBC Act Protected Matters database, and the Wildlife Online database based on the area shown in **Appendix A** and **Appendix B**.

3.1.1 NC Act Wildlife Online

The NC Act Wildlife Online database search returned records of 956 terrestrial plant species, of which 66 were EVNT plant species (see **Table 1**). The complete online search results are provided in **Appendix A**.

3.1.2 EPBC Act Protected Matters search tool

Searches of the EPBC Act Protected Matters Search Tool returned records of 34 terrestrial plant species listed as threatened species pursuant to the *EPBC Act* (see **Table 1**). The complete online search results are provided in **Appendix B**.

3.1.3 Regional Ecosystem mapping

Table 2 outlines the regional ecosystems (REs) likely to occur within the project site and CIA.

Table 1 Potentially occurring threatened species (EPBC Act and NC Act)

Common Name	Scientific Name	Status	Status
		EPBC	NCA
Threatened Flora			
pale chandelier orchid	*Acriopsis emarginata*	V	V
	Acronychia acuminata	-	NT
	Actephila foetida	V	V
jewel orchid	*Anoectochilus yatesiae*	-	NT
	Archidendron kanisii	-	V
	Argophyllum cryptophlebum	-	NT
	Argophyllum iridescens	-	V
hairy-joint grass	*Arthraxon hispidus*	V	V
	Austromuellera trinervia	-	NT

Common Name	Scientific Name	Status	Status
		EPBC	NCA
Threatened Flora			
	Beilschmiedia castrisinensis	-	NT
	Bubbia queenslandica subsp. queenslandica	-	E
	Bubbia whiteana	-	CR
	Buchanania mangoides	-	V
	Buckinghamia ferruginiflora	-	V
Haines's orange mangrove	*Bruguiera x hainesii*	CR	CR
	Canarium acutifolium	V	V
	Ceratopetalum corymbosum	-	V
	Cheilocostus potierae	-	E
	Citrus inodora	-	V
	Carronia pedicellata	E	E
	Chingia australis	E	E
	Crepidomanes aphlebioides	-	CR
	Cyclophyllum costatum	V	V
	Demorchis queenslandica	-	NT
chocolate tea-tree orchid	*Dendrobium johannis*	V	V
dark-stemmed antler orchid	*Dendrobium mirbelianum*	E	E
	Dendrobium nindii	E	E
	Dioclea hexandra	-	V
	Dissiliaria tuckeri	-	V
	Drosera prolifera	V	V
	Endiandra cooperana	E	E
	Endiandra grayi	-	V
	Endiandra micronuera	-	NT
	Freycinetia marginata	-	E
	Freycinetia percocosta	-	V
	Gardenia actinocarpa	E	E
	Gymnostoma australianum	-	V
	Hedyotis novoguineensis	-	E
yellow siris	*Heliodendron xanthoxylon*	-	NT

Common Name	Scientific Name	Status	Status
		EPBC	NCA
Threatened Flora			
	Hymenasplenium wildii	V	V
	Hymenophyllum kerianum	-	V
	Hymenophyllum pallidum	-	NT
	Isachne sharpii	-	E
	Kayea larnachiana	-	V
	Leichhardtia araujacea	CE	CE
	Lindsaea terrae-reginae	-	E
	Linospadix palmerianus	-	NT
	Megahertzia amplexicaulis	-	NT
pimple fern	*Microsorum membranifolium*	-	NT
	Mischocarpus albescens	-	NT
	Mitrantia bilocularis	CR	CR
ant-plant	*Myrmecodia beccarii*	V	V
	Neostrearia fleckeri	-	NT
	Paramapania parvibractea	-	V
forest swamp orchid	*Phaius pictus*	V	V
native moth orchid	*Phalaenopsis amabilis subsp. rosenstromii*	E	E
	Phaleria biflora	V	V
blue tassel-fern	*Phlegmariurus dalhousieanus*	E	CR
rat's-tail tassel-fern	*Phlegmariurus creber* syn. *P. filiformis*	E	CR
	Phlegmariurus phlegmarioides	-	V
rock tassel-fern	*Phlegmariurus squarrosus*	CR	CR
square tassel-fern	*Phlegmariurus tetrastichoides*	V	V
	Phyllanthus brassii	-	V
middle filmy fern	*Polyphlebium endlicherianum*	E	V
	Polyscias bellendenkerensis	V	V
	Randia audasii	-	NT
	Ristantia gouldii	V	V
	Rhodamnia sessiliflora	-	E
	Rhodomyrtus effusa	-	E

Common Name	Scientific Name	Status EPBC	Status NCA
Threatened Flora			
	Rhodomyrtus pervagata	-	E
	Ryparosa kurrangii	-	NT
	Sarcopteryx montana	-	NT
	Samadera baileyana	-	NT
	Sphaerantia discolor	-	V
	Stenocarpus cryptocarpus	-	NT
fern-leaved stenocarpus	*Stenocarpus davallioides*	-	V
	Strongylodon lucidus	-	NT
	Symplocos oresbia	-	NT
	Syzygium glenum	-	E
	Trachymene geraniifolia	-	NT
	Tristellateia australasiae	-	NT
thin feather orchid	*Tropilis callitrophilis*	V	V
dwarf butterfly orchid	*Vappodes lithocola*	E	-
Cooktown orchid	*Vappodes phalaenopsis* syn. *Dendrobium bigibbum*	V	V
	Vrydagzynea grayi	E	E
	Wilkiea sp. (McDowall Range J. G. Tracey 14552)	-	NT
	Whyanbeelia terra-reginae	-	NT
	Xanthophyllum fragrans	-	NT
Tully penda	*Xanthostemon formosus*	E	E
	Zieria madida	-	CR
velvet jewel orchid	*Zeuxine polygonoides*	V	V

Key: Ex: Extinct; CR: Critically Endangered; E: Endangered; V: Vulnerable; NT: Near Threatened

Table 2 Project site and CIA mapped remnant Regional Ecosystem descriptions

RE/Biodiversity Status	Description (REDD version 11.1)	Location	Site Value
Wet Tropics Bioregion (7) – Land Zone 1 – Estuarine Sediments			

RE/Biodiversity Status	Description (REDD version 11.1)	Location	Site Value
RE 7.1.1 LC/NCAP	Mangrove closed scrub to open forest. Sheltered coastlines, estuaries, and deep swales between dunes, on fine anaerobic silts, inundated with saline water at high tide.	The northern side of the Daintree River on both the east and west side of Cape Tribulation Road	Threatened species include: *Myrmecodia beccarii* (ant plant) Pre-clear extent = 47 000 ha; 2021 extent = 45 000 ha
RE 7.1.4a OC/E	Mesophyll vine forest/mangrove complex. Canopy species include *Heritiera littoralis, Bruguiera gymnorhiza, Sonneratia alba, Barringtonia racemosa, Archontophoenix alexandrae, Elaeocarpus grandis, Melicope elleryana, Acacia mangium* and *Syzygium tierneyanum*. Inland margins of mangroves and estuaries. Intertidal	Located along the both the north and south banks of the Daintree River	Habitat for threatened epiphyte species (e.g., epiphytic tassel ferns and orchids). Pre-clear extent = 300 ha; 2021 extent = 200 ha
Wet Tropics Bioregion (7) – Land Zone 3 – Loamy Alluvia			
RE 7.3.5a LC/E	*Melaleuca quinquenervia* open forest, woodland and shrubland. Lowlands of the very wet and wet rainfall zone, on poorly drained peaty humic gley soils where the water table is near or above the ground for most of the year. Palustrine. Scattered across the coastal lowlands, predominantly the Innisfail and Tully subregions.	Located on the corner of Cape Tribulation Road and Forest Creek Road on the northern side of the Daintree River	This regional ecosystem plays a critical role in the hydrological regime of the coastal plain. Pre-clear extent = 25 000 ha; 2021 extent = 11 000 ha
RE 7.3.23a	Simple-complex semi-deciduous notophyll to mesophyll vine forest. Lowlands on alluvium, predominantly riverine levees, of the moist and dry rainfall zones. Riverine	Located along the Southern Bank of the Daintree River	Suitable habitat for *Randia audasii, Rhodamnia sessiliflora* and *Rhodomyrtus effusa* Pre-clear extent = 15 000 ha; 2021 extent = 4 000 ha
RE 7.3.25a OC/OC	*Melaleuca leucadendra* open forest and woodland. Stream levees and prior streams on well-drained sandy clay loam alluvial soils. Riverine	Not present within the project site or clearance impact areas	Important wildlife corridors in cleared landscapes. Pre-clear extent = 8 000 ha; 2021 extent = 5 000 ha

Key: LC: Least Concern; NCAP: No Concern at Present; OC: Of Concern; E: Endangered

4.0 Field survey results

A protected plant survey was undertaken over two consecutive days on Monday 8 and Tuesday 9 July 2024. The entire proposed alignment and an additional 100 m buffer (clearance impact area - CIA) was traversed on foot by 4 Elements botanist Ryan Hughes, and Dr Mark Nadir Runkovski. The purpose was to assess the ecological condition of the clearance impact area and provide information on the following:

- Map distribution and abundance of NC Act 1992 and EPBC Act 1999 threatened flora individuals.
- Presence of invasive weed species and the potential impact on threatened flora habitat values.
- Describe vegetation condition including weed incursions within the clearance impact area.

4.1 Vegetation communities

A total of five (5) regional ecosystems were recorded within the proposed alignment and clearance impact area (CIA). They can broadly be separated based on tidal influence with three (3) regional ecosystems having a strong tidal influence (mangrove communities) and two (2) regional ecosystems occurring just above regular tidal influence (complex vine forests/paperbark swamp). The vegetation communities identified during the field survey and the threatened plant species they provide habitat for are described below.

4.1.1 Estuarine communities

The distribution of the three (3) mangrove forest communities present within the clearance impact area were dependent on varying levels of tidal influence. Each community is described below from highest to lowest tidal influence.

Regional ecosystem 7.1.1 (see **Plate 1** below) was located below the high tide which receives frequent tidal inundation. This only permits establishment of vegetation that is highly salt tolerant. The closed canopy layer consisted of *Bruguiera gymnorhiza* and *B. sexangula* at a height of 5-8m. An open understory consisted of *Bruguiera* spp., *Lumnitzera racemosa, Xylocarpus graniticum* and *Rhizophora stylosa*. A low and sparse shrub layer 0.5-1m in height consisted of *Acrostichum speciosum* and juvenile canopy species. Epiphytes were abundant with *Dendrobium discolor* and the NC act 1992 and EPBC act 1999 Vulnerable listed Ant Plant *Myrmecodia beccarii* being the most common species. An additional NC act 1992 and EPBC act 1999 Vulnerable listed orchid *Acriopsis emarginata* was also recorded at a single location within the vegetation community. Due to regular tidal inundation, leaf litter and coarse woody debris was limited.



Plate 1. Regional Ecosystem 7.1.1 within the CIA

A second distinct mangrove community was also present within the clearing impact area for the project. This was RE 7.1.4a (see **Plate 2**). This vegetation community is listed as Of Concern under the *Vegetation Management act 1999*. This community was slightly elevated occurring on upper limit of saline influence. An open to closed canopy consisted of *Heritiera littoralis*, *Xylocarpus granatum* and *Bruguiera* spp. to a height of 5-10m. An open understory 1.5- 3m in height comprised *Cynometra iripa* and juvenile canopy species. Leaf litter and accumulation was limited due to tidal inundation. Many canopy trees had well developed root buttressing. Epiphytes were abundant with the *NC act 1992* and *EPBC act 1999* Vulnerable listed Ant Plant *Myrmecodia beccarii* being the most common species.



Plate 2. Regional Ecosystem 7.1.4a within the CIA

A third mangrove community was located to the northwest of Cape Tribulation Road on the northern bank of the Daintree River (see **Plate 3** below). It is likely that Cape Tribulation Road acts as a barrier to tidal inundation which allows for the increased influence of freshwater to permit the establishment of *Melaleuca* spp. This community occurred on a poorly draining site where the water table is close to or above the ground surface. Here tall, closed forest to 20 m in height comprised *Bruguiera* spp., *Rhizophora* spp., *Heritiera littoralis* and *Melaleuca quinquenervia*. The understory development consisted of juvenile canopy species with a sparse ground layer of *Acrostichum speciosum*. Epiphytes were present although not abundant. The Golden Orchid *Dendrobium discolor* was occasionally present. The Ant Plant *Myrmecodia beccarii* listed Vulnerable under the *NC act 1992* and the *EPBC act 1999* was present in very low numbers compared to the communities with a higher level of tidal inundation. The tall dense canopy shades the larger and more stable branches where the Ant Plant generally establishes. This vegetation structure likely explains the relative absence of this species within this community. A well-developed leaf litter and coarse woody debris was present due a reduced tidal inundation of this community.



Plate 3. Regional Ecosystem 7.1.5 within the CIA

4.1.2 Non-estuarine communities

Two (2) vegetation communities were located at an elevation that excludes the influence of tidal inundation. Within these areas a more structurally diverse and species rich vegetation community was present. These communities are described below.

Regional Ecosystem 7.3.5 was restricted to the northern side of the project site. This was a community that is influenced by near continual freshwater inundation which had an open forest structure to 20 m in height of *Melaleuca quinquenervia, M. leucadendra* and *M. cajuputi*. A diverse complex vine forest understory to 3- 12 m was present which comprised *Carallia brachiata, Ficus variegata, Macaranga tanarius* and *Cyclophyllum* sp. The climbing fern *Stenochlaena palustris* covered many of the lower trunks of *Melaleuca* spp. canopy trees. No protected plants were recorded within the clearance impact area within this vegetation community.



Plate 4. Regional Ecosystem 7.3.5a within the CIA

Regional Ecosystem 7.3.23 was restricted to a narrow band <20m wide on the southern bank of the Daintree River. This was the most structurally and floristically diverse community present within the project site. A dense closed canopy comprised of *Syzygium monospermum, Acacia celsa, Aleurites rockinghamensis* and *Terminalia sericocarpa* reached a height of 16-18m. A dense understory 6-10 m in height comprised *Mallotus philippensis, Alstonia muelleriana, Atractocarpus fitzalanii* and *Myristica globosa*. A sparse shrub layer was predominantly comprised of canopy and understory species. The *NC act 1992* Endangered listed understory trees *Rhodamnia sessiliflora* and *Rhodomyrtus effusa* were commonly recorded within this vegetation community.



Plate 5. Regional Ecosystem 7.3.23 within the CIA

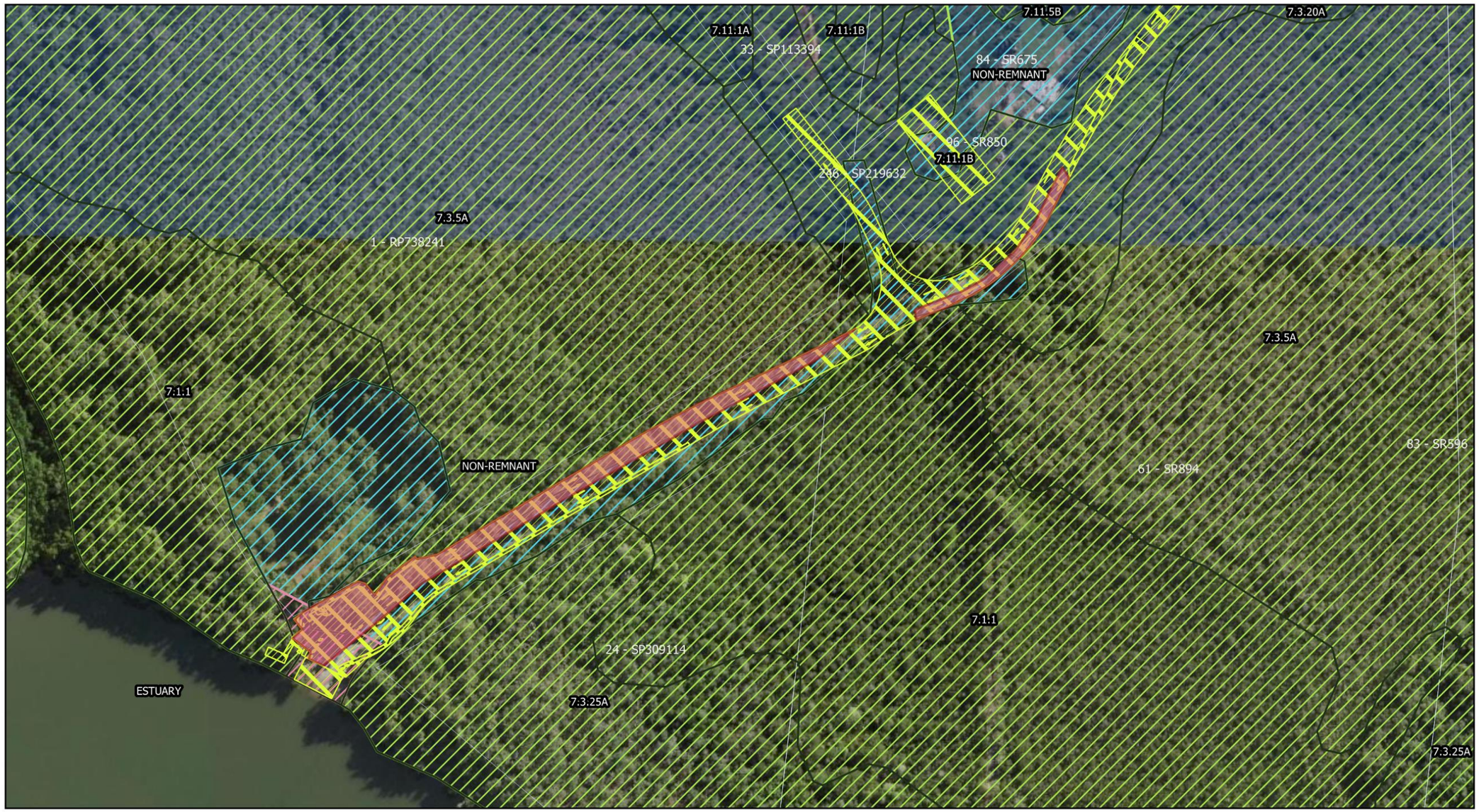


Figure 5: Northern project alignment Regulated Vegetation

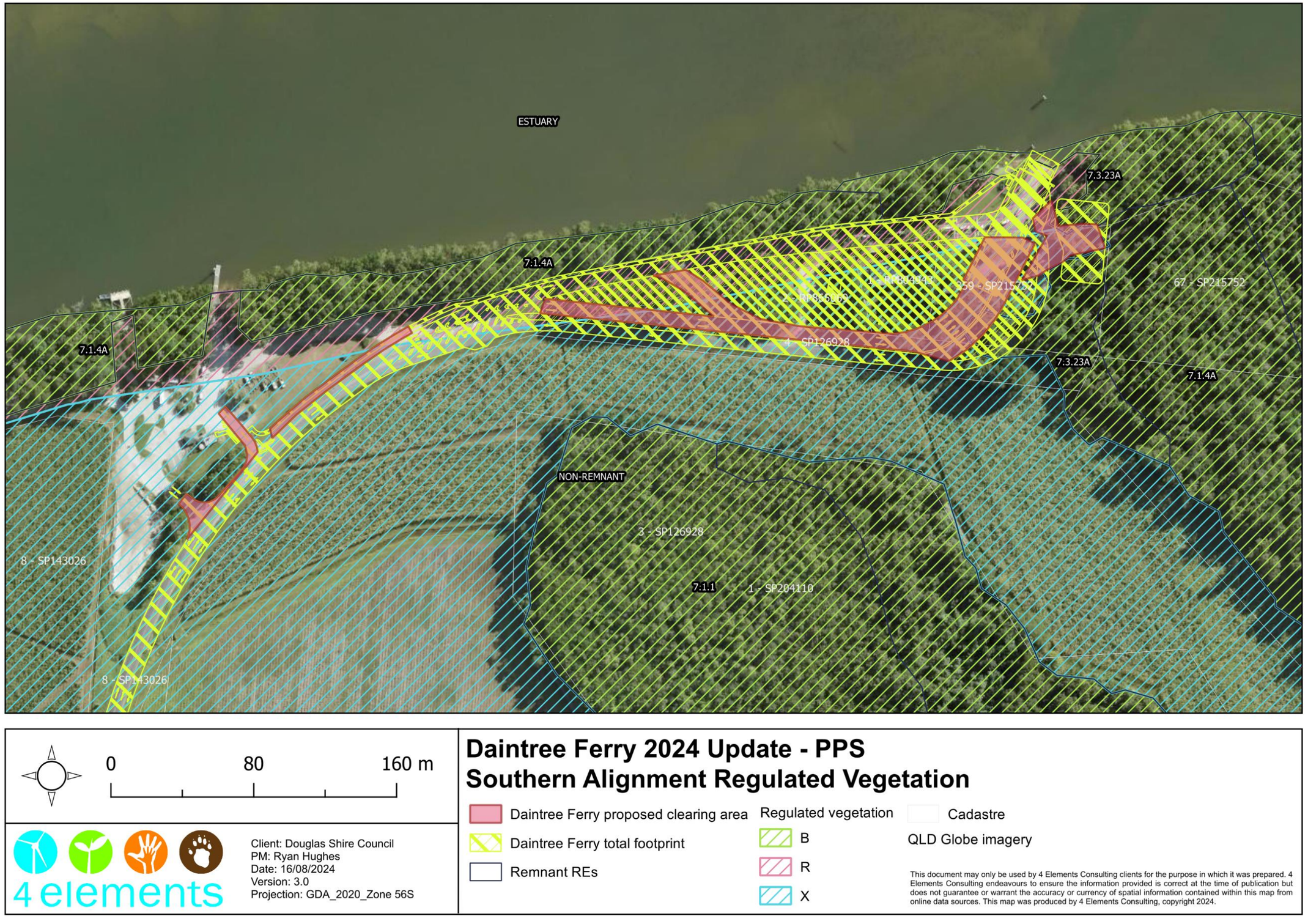


Figure 6: Southern project alignment Regulated Vegetation

4.2 General flora

A total of 251 flora species were recorded within the clearing impact area (see **Appendix F**). A total of 209 species were native and 42 were non-native weeds (about 16%). The weed cover was mostly restricted to ground herbs and grasses outside of the dripline of the remnant vegetation communities. Along vegetation edges and disturbed areas including topsoil stockpiles, weed incursions were high.

4.3 Project site threatened flora (protected plants)

The timed meander survey recorded six (6) EVNT flora species within the project alignment and associated 100 m buffer (CIA). No additional threatened flora species to those recorded during the survey are considered likely to occur based on the potential occurrence assessment provided in **Appendix B**. A single species (*Randia audasii*) was recorded in a landscaped garden within a non-remnant vegetation area and is deemed to be 'not in the wild' (as determined by Queensland Government, 2023). Therefore, this species has not been assessed further. All other threatened flora recorded are detailed below.

4.3.1 Ant Plant – *Myrmecodia beccarii* (Vulnerable EPBC 1999 and NC Acts 1992)

The Ant Plant, *Myrmecodia beccarii*, was frequently recorded on the northern side of the Daintree River. This plant is a member of the Rubiaceae family. It has a narrow distribution being restricted to the coastal woodlands and mangrove communities between Ingham and Cooktown (AVH 2023).

Myrmecodia beccarii is a tuberous epiphyte which can reach a diameter up to 30 cm (DCCEEW 2008). The outside of the tuber is pale brown to grey with small spines borne on mounds. On mature plants, internal chambers form inside the tuber with smooth entrances where the Golden Ant (*Iridiomyrmex cordatus*) and the Apollo Jewel Butterfly (*Hypochrysops apollo apollo*) enter the plant forming a mutually beneficial relationship with the host plant. Stems emerge unbranched from the tuber of the plant where succulent elliptic to oblanceolate leaves to 9cm in length are oppositely arranged. Small white flowers (1cm in length) are pollinated to produce white fleshy fruits containing numerous seeds that are dispersed by birds and readily germinate when deposited on the branches of rough-barked trees such as *Melaleuca* spp.

Within the project site, *Myrmecodia beccarii* was recorded exclusively in the northern side of the Daintree River, in all three (3) mangrove communities (see **Figure 7** & **Plate 6** below). The highest abundance was immediately to the southeast of Cape Tribulation Road where a total of 567 individuals were recorded within the CIA. Some mature *Bruguiera* sp. and *Heritiera littoralis* trees were recorded with more than 10 individual plants per tree. The population had a diverse age structure with recently germinated plants and mature flowering plants commonly encountered (see **Plate 6** below). This species was much more abundant where the canopy layer comprised a more open structure. This allowed for a higher light level on the rigid lower branches and trunks of host trees. Where the mangrove canopy had a closed structure, west of Cape Tribulation Road, only the upper smaller tree limbs had high light exposure. These limbs move readily in the wind which likely prevents or reduces

establishment of this species. The mangrove communities east of Cape Tribulation Road provided the most suitable vegetation structure and therefore contained nearly all individuals recorded.



Plate 6. *Myrmecodia beccarii* mature plant (left) and juvenile plants (right) growing on mature *Bruguiera* sp. within the CIA

4.3.2 Iron Malletwood – *Rhodamnia sessiliflora* (Endangered NC Act 1992)

During the field survey *Rhodamnia sessiliflora* (Iron Malletwood) was recorded (Plate 4). There is no EPBC Act 1999 listing currently for this species, but it is listed as Endangered under the NC Act and was recorded within the CIA. This species is a wet tropics-endemic restricted to the coastal ranges between Rossville and Paluma (AVH 2022). Within this range *R. sessiliflora* is widespread occurring on a variety of soil types within the lower structural layer of well-developed vine forest communities between sea level and 1000m asl (Zich et al. 2022). It is an understory tree within the Myrtaceae family to a height of 10 m. It is distinguished by its distinctive three veined leaves which are clothed in dense white hairs when developing (Snow 2007). The bark is red brown in colour and peels off the trunk in long fibrous strips. When flowers are present, they are stalkless (sessile) which is another key distinguishing feature of this species. This species is commonly recorded in naturally disturbed areas within vine forest communities such as along watercourses in near canopy gaps and edges. This species also occurs occasionally within wet sclerophyll forest communities where a well-developed vine forest understory has developed.

Despite being relatively common and widespread within the region, this species is threatened primarily due to the impact of myrtle rust (*Austropuccinia psidii*). This infection is a recent introduction to Australia that impacts a high number of Myrtaceae species within moist forests. Myrtle rust impacts new season growth and flower and fruit material which reduces the ability of plants to grow and reproduce. Most specimens encountered in the field are older plants that were present prior to the arrival of myrtle rust. Flowering, fruiting and recruitment of this species is uncommonly encountered since the introduction of myrtle rust. As mature plants in a population die, they may not be replaced at a sufficient rate to maintain the population, leading to extinction.

Within the project site, *R. sessiliflora* were all located along the Daintree River on the southern bank within a narrow strip of complex mesophyll vine forest RE 7.3.23 and on the northern bank in areas of RE 7.3.5a along Forest Creek Road. The total population within the CIA was 19 individual plants (**Figure 8**). The population contained a number of mature specimens of diameters close to 8 cm diameter at breast height (DBH) which is relatively large for this species. Several small plants were observed in the ground layer suggesting potential recruitment within the population. However, due to the suckering nature of this species in response to disturbance through wind and flood impact, it was difficult to determine if these plants had recently germinated or were suckering shoots from the roots of nearby mature plants. Myrtle rust infection was commonly recorded on most plants, however, evidence of impact from infection during the survey was relatively low. Many individuals had examples of new leaf material that had very minor, or no impact recorded at the time of survey (**Plate 7**).



Plate 7. Leaves of *Rhodamnia sessiliflora* on the project site with three-veined leaves in opposite pairs. Top surface leaf material (left) and underside leaf material (right)

4.3.3 Pale Chandelier Orchid – *Acriopsis emarginata* (Vulnerable NC Act 1992 and EPBC Act 1999)

Acriopsis emarginata (Pale Chandelier Orchid) is listed as Vulnerable under the NC Act and EPBC Act, and was recorded at a single location within the clearance impact area. This species is recorded within Australia from the tip of Cape York Peninsular to the Daintree River (AVH 2022). Within this range *A. emarginata* is restricted to lowland rainforest margins and swamps within an elevational range of 0-300 asl (Jones et al. 2006).

Acriopsis emarginata is an epiphytic or lithophytic plant within the Orchidaceae family. It is frequently recorded growing on the stems of *Melaleuca* spp., palms, and *Pandanus* spp. Pseudobulbs are crowded in tight clumps and are ovoid in shape up to 7 cm in length and green in colour. Leaves are sessile and erect and are held at the apical end of the pseudobulb in groups of 2-4. This species is readily distinguished in the field by its thin much branched aerial roots than cover much of the clumping pseudobulbs where the plant attaches to the host tree (see **Plate 8**).

Within the CIA, *Acriopsis emarginata* was recorded at a single location on the northern side of the Daintree River within mangrove vegetation community RE 7.1.1. It was recorded growing on the upper trunk of a *Brugiera* sp. trunk at approximately 5 m in height with an easterly orientation (**Plate 8**).



Plate 8. *Acriopsis emarginata* recorded within the CIA within RE 7.1.1

4.3.4 Blue Antler Orchid – *Dendrobium nindii* (Endangered NC Act 1992 and EPBC Act 1999)

Dendrobium nindii (Blue Antler Orchid) is listed as Endangered under the NC Act and EPBC Act, and was recorded as 23 individual plants within the CIA. This species is recorded within Australia from the McIlwraith Range on the Cape York Peninsula south to Innisfail (Australian Government, 2008). Within this range the orchid is restricted to sea-level and < 400m asl near-coastal swamps, coastal rainforests, mangroves, and gorges.

Dendrobium nindii is an epiphytic plant within the Orchidaceae family. The plant forms stiffly erect, cylindrical, ribbed, dark brownish to blackish pseudobulbs that are leafy in the upper half. It bears 6–22 leaves that grow 8–15 cm long. Leaves are dark green and leathery, and often concave and notched (Jones, 2006). The raceme is 20–50 cm long, carrying 8–20 flowers (Jones, 2006). This species is readily distinguished in the field from the similar D. undulatum by its blunter leaf-tips and blue-purple flowers (see **Plate 9**).

Within the CIA, this orchid was recorded at 19 different locations totalling 23 plants on the northern side of the Daintree River within mangrove vegetation community RE 7.1.4a. It was recorded growing on the upper trunk of both Melaleuca and Heritiera trunks at approximately 7-9 m in height.

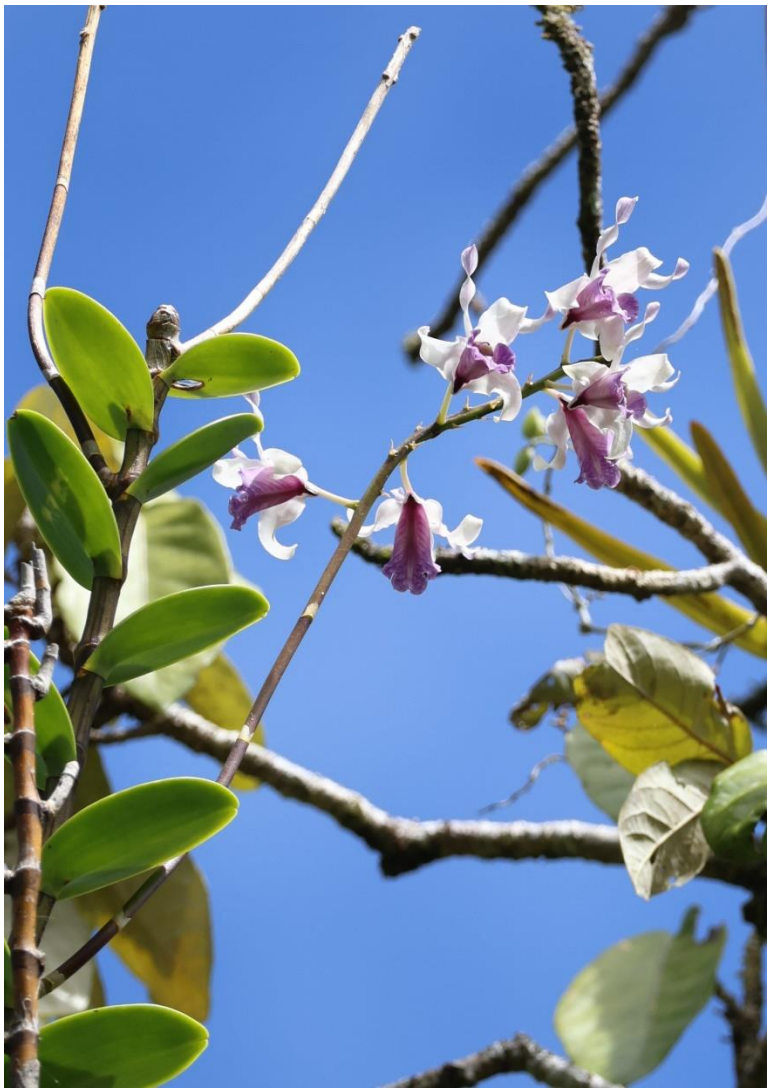


Plate 9. *Dendrobium nindii* recorded within the CIA within RE 7.1.4a

4.3.5 *Rhodomyrtus effusa* (Endangered NC Act 1992)

During the field survey *Rhodomyrtus effusa* was recorded (Plate 10). There is no EPBC Act 1999 listing currently for this species, but it is listed as Endangered under the NC Act and was recorded within the CIA. This species is a wet tropics-endemic restricted to disturbed or previously disturbed areas of lowland rainforest < 200m asl (Australian Tropical Rainforest Plants, 2024). It is an understory tree within the Myrtaceae family, but unusually it can also resemble a vine with a very poor and scraggy climbing habit. It is distinguished by its distinctive three veined leaves, the undersides of which are covered in long brown hairs (Australian Tropical Rainforest Plants, 2024). When flowers are present, they are produced singly on stalks of about 5-10 mm long. This species is often recorded in naturally disturbed areas within vine forest communities such as along watercourses in near canopy gaps and edges.

This species is threatened primarily due to the impact of myrtle rust (*Austropuccinia psidii*). This infection is a recent introduction to Australia that impacts a high number of Myrtaceae species within moist forests. Myrtle rust impacts new season growth and flower and fruit material which reduces the ability of plants to grow and reproduce. Flowering, fruiting and recruitment of this species is uncommonly encountered since the introduction of myrtle rust. As mature plants in a population die, they may not be replaced at a sufficient rate to maintain the population, leading to extinction.

Within the project site, *R. effusa* were all located at the very northern extreme of the CIA along the Cape Tribulation Road and Forest Creek Road in wet notophyll vine forest (RE 7.11.1b) and on the banks in areas of RE 7.3.5a. The total population within the CIA was 10 individual plants in 6 locations (**Figure 7**). Several small plants were observed in the ground layer suggesting potential recruitment within the population. However, due to the suckering nature of this species in response to disturbance through wind and flood impact, it was difficult to determine if these plants had recently germinated or were suckering shoots from the roots of nearby mature plants. Myrtle rust infection was commonly recorded on most plants of this species.



Plate 10. *Rhodomyrtus effusa* on the project site with three-veined leaves in opposite pairs. Growth form and habit (left) and underside leaf material (right)

Table 3. Locations of all EVNT (protected) plants observed during field surveys

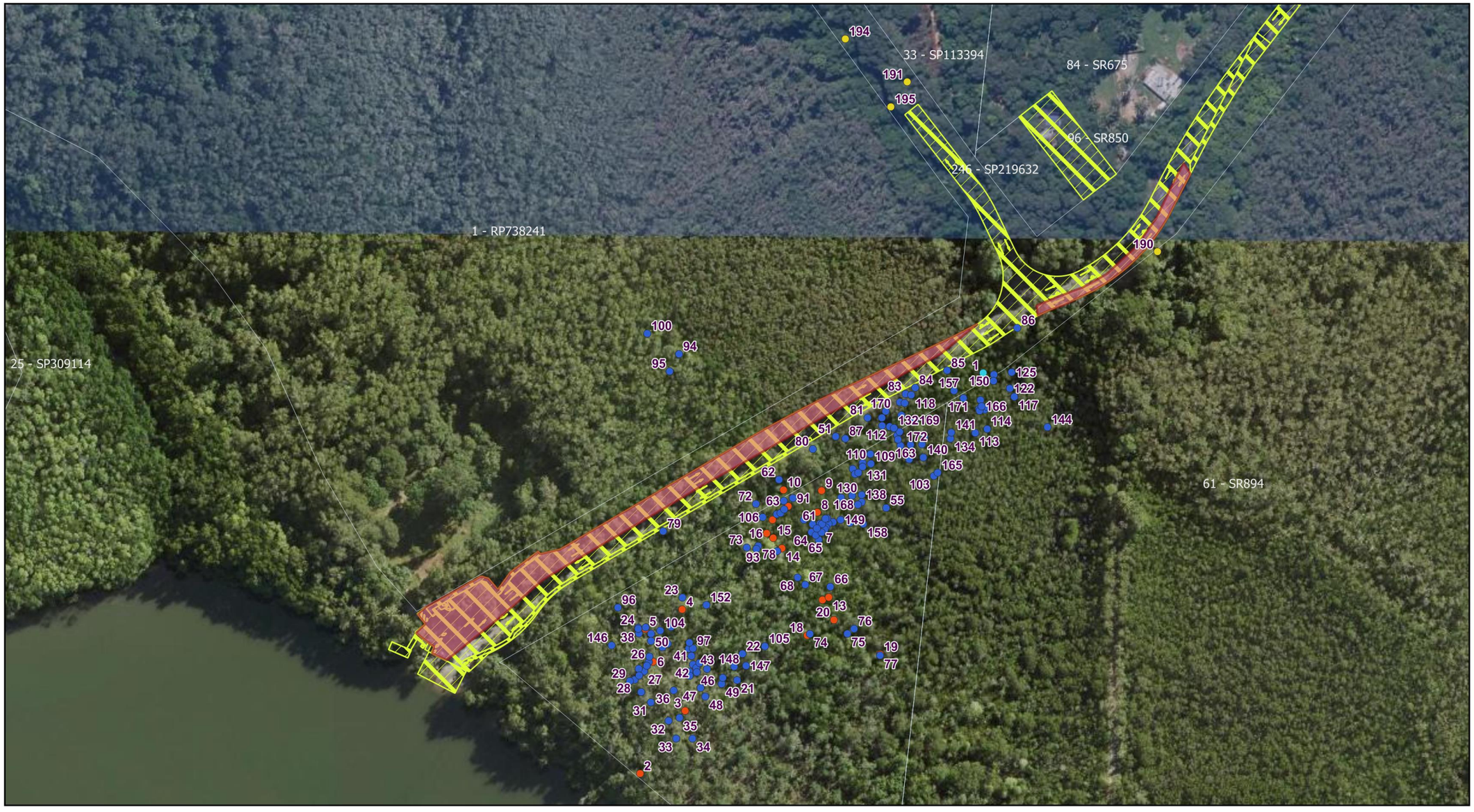
Species	ID	Lat	Long	# Plants	Notes
Acriopsis emarginata	1	-16.25730998	145.401226	1	Mapped in last survey
Dendrobium nindii	2	-16.259026	145.399695	2	
Dendrobium nindii	3	-16.258757	145.399896	1	
Dendrobium nindii	4	-16.258323	145.399883	1	
Dendrobium nindii	5	-16.258407	145.399719	1	
Dendrobium nindii	6	-16.258547	145.399753	1	
Dendrobium nindii	7	-16.257979	145.400506	1	
Dendrobium nindii	8	-16.257907	145.400486	3	
Dendrobium nindii	9	-16.257814	145.400505	1	
Dendrobium nindii	10	-16.257811	145.400335	1	
Dendrobium nindii	11	-16.257881	145.400356	1	
Dendrobium nindii	12	-16.258282	145.400509	1	
Dendrobium nindii	13	-16.258271	145.400537	1	
Dendrobium nindii	14	-16.258061	145.400328	2	
Dendrobium nindii	15	-16.258017	145.400289	1	
Dendrobium nindii	16	-16.257997	145.40026	1	
Dendrobium nindii	17	-16.257939	145.400286	1	
Dendrobium nindii	18	-16.258434	145.400441	1	
Dendrobium nindii	19	-16.258515	145.400767	1	
Dendrobium nindii	20	-16.258368	145.40056	1	
Myrmecodia beccarii	21	-16.258626	145.400128	2	
Myrmecodia beccarii	22	-16.258513	145.400152	4	
Myrmecodia beccarii	23	-16.258272	145.399884	1	
Myrmecodia beccarii	24	-16.258401	145.399687	6	
Myrmecodia beccarii	25	-16.258426	145.39969	10	
Myrmecodia beccarii	26	-16.258548	145.399734	1	
Myrmecodia beccarii	27	-16.258588	145.399713	6	
Myrmecodia beccarii	28	-16.258624	145.399671	5	
Myrmecodia beccarii	29	-16.25863	145.399649	5	
Myrmecodia beccarii	30	-16.258677	145.3997	3	
Myrmecodia beccarii	31	-16.258721	145.399743	4	
Myrmecodia beccarii	32	-16.2588	145.399822	2	
Myrmecodia beccarii	33	-16.258876	145.399856	5	
Myrmecodia beccarii	34	-16.258876	145.399929	1	
Myrmecodia beccarii	35	-16.258787	145.399871	3	
Myrmecodia beccarii	36	-16.25867	145.399845	1	
Myrmecodia beccarii	37	-16.258577	145.399689	1	
Myrmecodia beccarii	38	-16.258406	145.399687	4	

Species	ID	Lat	Long	# Plants	Notes
Myrmecodia beccarii	39	-16.258398	145.399833	4	
Myrmecodia beccarii	40	-16.258491	145.399912	6	
Myrmecodia beccarii	41	-16.258522	145.399924	5	
Myrmecodia beccarii	42	-16.258559	145.399931	4	
Myrmecodia beccarii	43	-16.258573	145.399946	2	
Myrmecodia beccarii	44	-16.258589	145.399914	3	
Myrmecodia beccarii	45	-16.258607	145.399916	1	
Myrmecodia beccarii	46	-16.258592	145.399948	3	
Myrmecodia beccarii	47	-16.258659	145.399965	3	
Myrmecodia beccarii	48	-16.258696	145.399986	5	
Myrmecodia beccarii	49	-16.258642	145.400059	3	
Myrmecodia beccarii	50	-16.258427	145.399744	1	
Myrmecodia beccarii	51	-16.257582	145.400568	5	
Myrmecodia beccarii	52	-16.257721	145.400644	1	
Myrmecodia beccarii	53	-16.257741	145.400665	3	
Myrmecodia beccarii	54	-16.257695	145.400688	2	
Myrmecodia beccarii	55	-16.257888	145.400793	3	
Myrmecodia beccarii	56	-16.257949	145.400556	3	
Myrmecodia beccarii	57	-16.257956	145.400536	4	
Myrmecodia beccarii	58	-16.257933	145.40053	2	
Myrmecodia beccarii	59	-16.257972	145.400525	2	
Myrmecodia beccarii	60	-16.25798	145.400519	1	
Myrmecodia beccarii	61	-16.257955	145.400499	5	
Myrmecodia beccarii	62	-16.257767	145.400315	8	
Myrmecodia beccarii	63	-16.257858	145.400336	1	
Myrmecodia beccarii	64	-16.257992	145.40046	7	
Myrmecodia beccarii	65	-16.258024	145.400492	2	
Myrmecodia beccarii	66	-16.258226	145.400544	1	
Myrmecodia beccarii	67	-16.258217	145.400432	5	
Myrmecodia beccarii	68	-16.258186	145.400398	7	
Myrmecodia beccarii	69	-16.258073	145.400307	8	
Myrmecodia beccarii	70	-16.257915	145.400305	10	
Myrmecodia beccarii	71	-16.25791	145.400322	2	
Myrmecodia beccarii	72	-16.257871	145.400212	7	
Myrmecodia beccarii	73	-16.258058	145.400171	1	
Myrmecodia beccarii	74	-16.258428	145.400453	4	
Myrmecodia beccarii	75	-16.258427	145.40062	5	
Myrmecodia beccarii	76	-16.258406	145.40065	3	
Myrmecodia beccarii	77	-16.25852	145.400766	1	

Species	ID	Lat	Long	# Plants	Notes
Myrmecodia beccarii	78	-16.258051	145.400222	7	
Myrmecodia beccarii	79	-16.257988	145.399798	2	
Myrmecodia beccarii	80	-16.257636	145.400466	2	
Myrmecodia beccarii	81	-16.257502	145.40071	6	
Myrmecodia beccarii	82	-16.257435	145.400854	5	
Myrmecodia beccarii	83	-16.2574	145.40088	4	
Myrmecodia beccarii	84	-16.257373	145.400923	2	
Myrmecodia beccarii	85	-16.257299	145.401065	2	
Myrmecodia beccarii	86	-16.257117	145.401378	3	
Myrmecodia beccarii	87	-16.25759102	145.400611	3	Mapped in last survey
Myrmecodia beccarii	88	-16.257832	145.400684	1	Mapped in last survey
Myrmecodia beccarii	89	-16.25800501	145.400479	1	Mapped in last survey
Myrmecodia beccarii	90	-16.25799302	145.400505	1	Mapped in last survey
Myrmecodia beccarii	91	-16.257846	145.400377	1	Mapped in last survey
Myrmecodia beccarii	92	-16.25757703	145.400843	1	Mapped in last survey
Myrmecodia beccarii	93	-16.25806401	145.400214	1	Mapped in last survey
Myrmecodia beccarii	94	-16.25722901	145.399869	1	Mapped in last survey
Myrmecodia beccarii	95	-16.25730302	145.399827	1	Mapped in last survey
Myrmecodia beccarii	96	-16.25831497	145.399596	1	Mapped in last survey
Myrmecodia beccarii	97	-16.25848998	145.399931	1	Mapped in last survey
Myrmecodia beccarii	98	-16.25762103	145.400857	1	Mapped in last survey
Myrmecodia beccarii	99	-16.25855201	145.39996	1	Mapped in last survey
Myrmecodia beccarii	100	-16.257141	145.399727	1	Mapped in last survey
Myrmecodia beccarii	101	-16.25768004	145.400896	2	Mapped in last survey
Myrmecodia beccarii	102	-16.25789403	145.400338	2	Mapped in last survey
Myrmecodia beccarii	103	-16.25775103	145.401006	2	Mapped in last survey
Myrmecodia beccarii	104	-16.25841396	145.399785	2	Mapped in last survey
Myrmecodia beccarii	105	-16.25848101	145.400252	2	Mapped in last survey
Myrmecodia beccarii	106	-16.25792798	145.400242	2	Mapped in last survey
Myrmecodia beccarii	107	-16.25774299	145.400654	2	Mapped in last survey
Myrmecodia beccarii	108	-16.25773704	145.400669	2	Mapped in last survey
Myrmecodia beccarii	109	-16.25769898	145.400725	2	Mapped in last survey
Myrmecodia beccarii	110	-16.257658	145.40072	2	Mapped in last survey
Myrmecodia beccarii	111	-16.25765699	145.400723	2	Mapped in last survey
Myrmecodia beccarii	112	-16.25753998	145.400809	2	Mapped in last survey
Myrmecodia beccarii	113	-16.25756697	145.401191	2	Mapped in last survey
Myrmecodia beccarii	114	-16.25755004	145.401244	2	Mapped in last survey
Myrmecodia beccarii	115	-16.25746697	145.401233	2	Mapped in last survey
Myrmecodia beccarii	116	-16.25731702	145.401274	2	Mapped in last survey

Species	ID	Lat	Long	# Plants	Notes
Myrmecodia beccarii	117	-16.25741199	145.401365	2	Mapped in last survey
Myrmecodia beccarii	118	-16.25740402	145.400905	2	Mapped in last survey
Myrmecodia beccarii	119	-16.25847003	145.399818	2	Mapped in last survey
Myrmecodia beccarii	120	-16.258564	145.399725	2	Mapped in last survey
Myrmecodia beccarii	121	-16.25746496	145.401207	3	Mapped in last survey
Myrmecodia beccarii	122	-16.25737603	145.401345	3	Mapped in last survey
Myrmecodia beccarii	123	-16.25756202	145.400853	3	Mapped in last survey
Myrmecodia beccarii	124	-16.25758599	145.400964	3	Mapped in last survey
Myrmecodia beccarii	125	-16.25730696	145.401353	3	Mapped in last survey
Myrmecodia beccarii	126	-16.25743898	145.400876	3	Mapped in last survey
Myrmecodia beccarii	127	-16.25860599	145.399691	3	Mapped in last survey
Myrmecodia beccarii	128	-16.25839996	145.39972	3	Mapped in last survey
Myrmecodia beccarii	129	-16.25857799	145.399994	3	Mapped in last survey
Myrmecodia beccarii	130	-16.25783603	145.400641	3	Mapped in last survey
Myrmecodia beccarii	131	-16.25771197	145.400688	3	Mapped in last survey
Myrmecodia beccarii	132	-16.25754601	145.400828	3	Mapped in last survey
Myrmecodia beccarii	133	-16.25795203	145.400632	4	Mapped in last survey
Myrmecodia beccarii	134	-16.25759102	145.40108	4	Mapped in last survey
Myrmecodia beccarii	135	-16.25846501	145.399915	4	Mapped in last survey
Myrmecodia beccarii	136	-16.25795698	145.400507	4	Mapped in last survey
Myrmecodia beccarii	137	-16.25784399	145.400592	4	Mapped in last survey
Myrmecodia beccarii	138	-16.25786302	145.400684	4	Mapped in last survey
Myrmecodia beccarii	139	-16.25749103	145.400861	4	Mapped in last survey
Myrmecodia beccarii	140	-16.25767199	145.400959	4	Mapped in last survey
Myrmecodia beccarii	141	-16.25756504	145.401084	4	Mapped in last survey
Myrmecodia beccarii	142	-16.25745499	145.401243	4	Mapped in last survey
Myrmecodia beccarii	143	-16.25742598	145.401214	4	Mapped in last survey
Myrmecodia beccarii	144	-16.25754199	145.401513	4	Mapped in last survey
Myrmecodia beccarii	145	-16.25852502	145.399737	4	Mapped in last survey
Myrmecodia beccarii	146	-16.25847699	145.399568	4	Mapped in last survey
Myrmecodia beccarii	147	-16.258564	145.400168	4	Mapped in last survey
Myrmecodia beccarii	148	-16.25856802	145.400115	4	Mapped in last survey
Myrmecodia beccarii	149	-16.25793904	145.40059	5	Mapped in last survey
Myrmecodia beccarii	150	-16.25734401	145.401272	5	Mapped in last survey
Myrmecodia beccarii	151	-16.25845796	145.399744	5	Mapped in last survey
Myrmecodia beccarii	152	-16.25830399	145.399991	5	Mapped in last survey
Myrmecodia beccarii	153	-16.25861596	145.400064	5	Mapped in last survey
Myrmecodia beccarii	154	-16.25793904	145.400426	5	Mapped in last survey
Myrmecodia beccarii	155	-16.25795798	145.400465	5	Mapped in last survey

Species	ID	Lat	Long	# Plants	Notes
Myrmecodia beccarii	156	-16.25750201	145.400774	5	Mapped in last survey
Myrmecodia beccarii	157	-16.257386	145.401096	5	Mapped in last survey
Myrmecodia beccarii	158	-16.25795698	145.400691	6	Mapped in last survey
Myrmecodia beccarii	159	-16.257976	145.400484	6	Mapped in last survey
Myrmecodia beccarii	160	-16.25793401	145.400522	6	Mapped in last survey
Myrmecodia beccarii	161	-16.25753604	145.400775	6	Mapped in last survey
Myrmecodia beccarii	162	-16.25759496	145.400846	6	Mapped in last survey
Myrmecodia beccarii	163	-16.25761701	145.400902	6	Mapped in last survey
Myrmecodia beccarii	164	-16.257472	145.40121	6	Mapped in last survey
Myrmecodia beccarii	165	-16.25773704	145.401023	7	Mapped in last survey
Myrmecodia beccarii	166	-16.25745297	145.401219	7	Mapped in last survey
Myrmecodia beccarii	167	-16.25848504	145.399795	7	Mapped in last survey
Myrmecodia beccarii	168	-16.257874	145.400667	7	Mapped in last survey
Myrmecodia beccarii	169	-16.25751198	145.400922	7	Mapped in last survey
Myrmecodia beccarii	170	-16.25747401	145.400791	7	Mapped in last survey
Myrmecodia beccarii	171	-16.25741802	145.401138	9	Mapped in last survey
Myrmecodia beccarii	172	-16.257616	145.400953	9	Mapped in last survey
Randia audassii	174	-16.26135	145.39754	1	Not in the wild
Rhodamnia sessiliflora	175	-16.255422	145.400212	5	
Rhodamnia sessiliflora	176	-16.255195	145.400218	1	
Rhodamnia sessiliflora	177	-16.26158	145.3936	1	Flagged from last survey
Rhodamnia sessiliflora	178	-16.261615	145.393847	1	Flagged from last survey
Rhodamnia sessiliflora	179	-16.261291	145.396033	1	
Rhodamnia sessiliflora	180	-16.260884	145.398797	1	
Rhodamnia sessiliflora	181	-16.260928	145.398856	1	
Rhodamnia sessiliflora	182	-16.26095	145.398912	1	
Rhodamnia sessiliflora	183	-16.261617	145.393595	1	
Rhodamnia sessiliflora	184	-16.255408	145.400239	1	
Rhodamnia sessiliflora	185	-16.26194199	145.393775	1	Mapped in last survey
Rhodamnia sessiliflora	186	-16.26174803	145.392626	1	Mapped in last survey
Rhodamnia sessiliflora	187	-16.26196696	145.392568	1	Mapped in last survey
Rhodamnia sessiliflora	188	-16.26086902	145.398784	1	Mapped in last survey
Rhodamnia sessiliflora	189	-16.26087497	145.398904	1	Mapped in last survey
Rhodomyrtus effusa	190	-16.25679	145.402004	1	
Rhodomyrtus effusa	191	-16.256063	145.400887	1	
Rhodomyrtus effusa	192	-16.255542	145.400264	1	
Rhodomyrtus effusa	193	-16.255471	145.4000213	5	
Rhodomyrtus effusa	194	-16.255879	145.400611	1	
Rhodomyrtus effusa	195	-16.25617	145.400814	1	



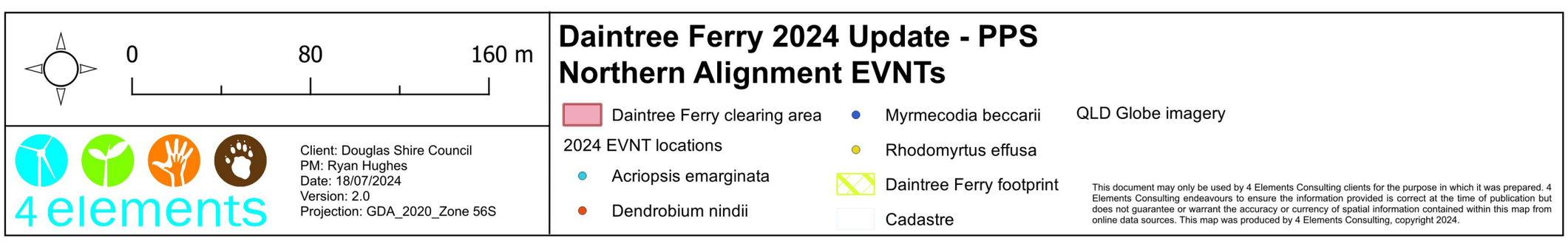


Figure 7: Northern project alignment – locations of protected plants (EVNTs)

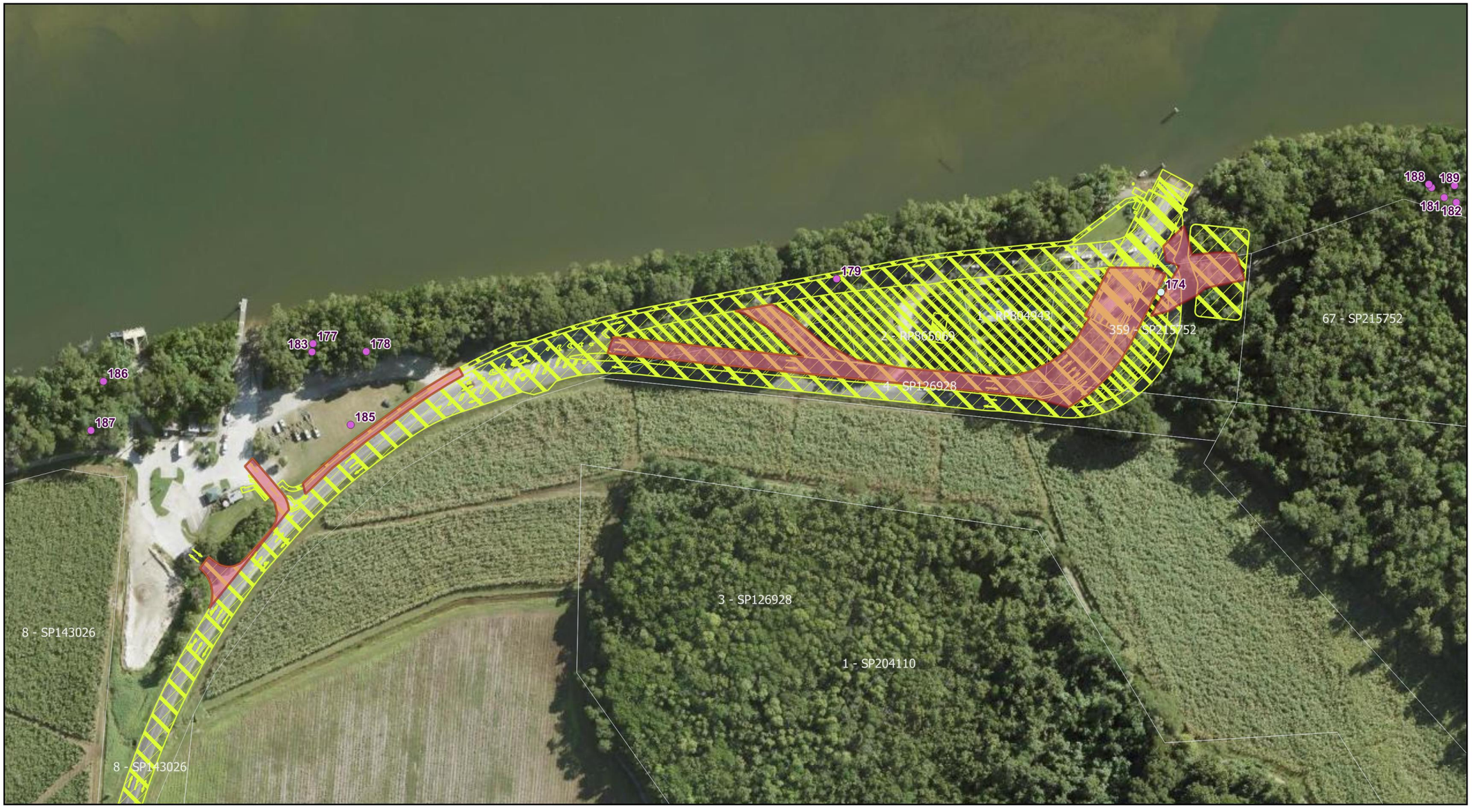


Figure 8: Southern project alignment – locations of protected plants (EVNTs)

4.4 Invasive weeds

Of the 42 weed species encountered during the survey, all were encountered directly adjacent to remnant vegetation areas which included native vegetation clearance boundaries where they formed a dominant structural component of the ground layer. No weeds of national significance (WoNS) were recorded within the CIA. No prohibited invasive weeds listed under the *Biosecurity Act 2014* were recorded during the survey. One (1) Category 3 restricted invasive weed listed pursuant to this Act, was Singapore Daisy (*Sphagneticola trilobata*), observed in areas around the fringes of vine forest and mangroves.

5.0 Conclusion

The Protected Plant Survey undertaken within the CIA and clearing footprint of proposed works at Daintree River Ferry terminals produced data on six (6) EVNT species listed under the Nature Conservation Act 1992 and/or Environment Protection and Biodiversity Conservation Act 1999. These species included:

- *Acriopsis emarginata* EPBC Act 1999 and NC Act 1992 (Vulnerable) (1 plant in CIA, none in clearing footprint)
- *Myrmecodia beccarii* EPBC Act 1999 and NC Act 1992 (Vulnerable) (567 plants in CIA, none in clearing footprint)
- *Randia audasii* NC Act 1992 (Near Threatened) (1 plant in CIA, considered 'not in the wild')
- *Rhodamnia sessiliflora* NC Act 1992 (Endangered) (19 plants in CIA, none in clearing footprint)
- *Rhodomyrtus effusa* NC Act 1992 (Endangered) (10 plants in CIA, none in clearing footprint)
- *Dendrobium nindii* EPBC Act 1999 and NC Act 1992 (Endangered) (19 plants in CIA, none in clearing footprint)

5.1 Specific legislative requirements

5.1.1 Protected plants

Due to the presence of protected plant populations within the CIA (<100 m from the proposed clearing alignment), although not within the proposed clearing alignment, a protected plant clearing permit notification is still required prior to clearing commencing. While direct impacts have been avoided due to the strategic planning of the proposed clearing alignment, **indirect clearing impacts will still need to be addressed in an Impact Management Plan** to mitigate residual impacts of the proposed works on protected plant populations within the CIA. An Impact Management Plan will be required to be submitted to Department of Environment, Science and Innovation's Permits and Licensing Management (PaLM) authority for endorsement prior to clearing.

6.0 Suitably qualified person

Ryan is recognised as a suitably qualified person by the Queensland Department of Environment, Science, and Innovation, and has regularly performed the role of project lead in Protected Plant Surveys in the last five (5) years. Ryan has graduated with a Bachelor of Science (Hons I) Griffith University Queensland 2008 and has worked as a Field Ecologist and Botanist since that time. He has been working as a full time Ecological Consultant for the past 8 years. He has formal training in plant taxonomy and ecology from both his tertiary qualifications and completion of an Advanced Botanical Identification post-graduate course with UNSW. He is an experienced leader, specialising in flora surveys, ecological assessment and monitoring, vegetation mapping, threatened flora translocation and site rehabilitation. He has been involved in threatened flora surveys across the NSW Mid-north Coast, Southeast Queensland, Brigalow Belt North, Wet Tropics, Einasleigh Uplands, Cape York Peninsular and the Darwin Coastal Bioregion.

The ability to identify flora in a range of habitats, understand their ecology and how this may be impacted (directly and indirectly) by an activity or development proposal is a core part of Ryan's profession and expertise. He has detected highly cryptic threatened species including *Acacia purpureopetala, Acacia attenuata, Macrozamia pauli-guilielmi* and *Prostanthera clotteniana* during site investigations and routinely assesses sites for the presence of threatened species from major urban growth projects to highway upgrades and other linear infrastructure.

Ryan has the necessary skills to undertake a wide array of ecological surveys including vegetation community mapping, identification and condition assessments, baseline monitoring surveys, bio-condition assessments, threatened species/ community identification and management.

An assessment of Ryan Hughes' skills and experience against the self-assessment criteria provided in the guideline is presented in **Table 5** below. To be determined a suitably qualified person a minimum total of 100 points is required.

Table 5. Details of suitably qualified person – Ryan Hughes

Component 1- Qualification Knowledge and Ability	**Conditions**	**Points Allocated**
A relevant qualification from a recognised institution that results in a thorough knowledge of plant identification and flora surveys	Bachelor of Science – Terrestrial Ecology Griffith University Gold Coast Queensland Focused	50 points
Component 2: Field Experience	**Conditions**	**Points Allocated**
Experience within the last two years and a total of at least 5 years leading flora surveys in a field-based environment at a rate of no less than 5 comprehensive botanical surveys that focus on locating and identifying threatened plant or near threatened plant.	Qld based field flora surveys. Ryan Hughes has been undertaking the lead role in flora surveys for a period of 10 years. Surveys includes Protected Plant Surveys, Bio-condition Monitoring Plots, Weed Surveys, Translocation Surveys, Regional Ecosystem Verification and Mapping Analysis.	60 points
Number of plant specimens that have been collected by the suitably qualified person that have been retained/ incorporated into the Queensland herbarium collection.	5 points per 5 plant specimens retained/ incorporated to a maximum of 40 points	20 points
Total points	**Must be greater than 100 points**	**130 points**

7.0 References

4 Elements Consulting (2023) Ecological assessment – Daintree Ferry terminal duplication – March 2023. Version 1.0. 128 p.

Australian Government (2024) Protected Matters search tool, viewed 25 June 2024, <https://pmst.awe.gov.au/>

Australian Government (2008) Approved conservation advice for *Dendrobium nindii*, viewed 12 July 2024, <https://www.environment.gov.au/biodiversity/threatened/species/pubs/78704-conservation-advice.pdf>

Australian Tropical Rainforest Plants (2024) Species profile for Rhodomyrtus effusa (Guymer), viewed 12 July 2024, < https://apps.lucidcentral.org/rainforest/text/entities/rhodomyrtus_effusa.htm>

BOM (Bureau of Meterology) (2024) Low Isles, Queensland – July 2024 daily weather observations, viewed 17 July 2024, < http://www.bom.gov.au/climate/dwo/IDCJDW4075.latest.shtml>

Goosem, M., Harding, E. K., Chester, G., Tucker, N., Harriss, C. and Oakley, K. (2010) Roads in rainforest: best practice guidelines for planning, design and management. Guidelines prepared for the Queensland Department of Transport and Main Roads and the Australian Government's Marine and Tropical Sciences Research Facility. Published by the Reef and Rainforest Research Centre Limited, Cairns (64pp.).

Jones, D, Hopley, T, & Duffy, S 2010, *Auatralian Tropical Rainforest Orchids*, *Australian Tropical Rainforest Orchids*, viewed 14 January 2021, <http://www.canbr.gov.au/cpbr/cd-keys/RFKOrchids/key/rfkorchids/Media/Html/index.htm>.

Neldner, V.J., Wilson, B.A., Dillewaard, H.A., Ryan, T.S., Butler, D.W., McDonald, W.J.F, Richter, D., Addicott, E.P. and Appelman, C.N. (2022) Methodology for survey and mapping of regional ecosystems and vegetation communities in Queensland. Version 6.0. Updated April 2022. Queensland Herbarium, Queensland Department of Environment and Science, Brisbane.

Queensland Government (2020) Flora survey guidelines - protected plants (Nature Conservation Act 1992), viewed 25 June 2024, <https://www.des.qld.gov.au/policies?a=272936:policy_registry/gl-wl-pp-flora-survey.pdf>

Queensland Government (2023) Operational policy - when a protected plant in Queensland is taken to be in the wild, viewed 25 June 2024, < https://www.des.qld.gov.au/policies?a=272936:policy_registry/op-wl-protected-plant-wild.pdf>.

Queensland Government (2024) Wildlife Online - request a species list, viewed 25 June 2024, < https://apps.des.qld.gov.au/report-request/species-list/>

Zich, F 2020a, *Australian Tropical Rainforest Plants*, *Australian Tropical Rainforest Plants*, viewed 13 February 2021, <https://apps.lucidcentral.org/rainforest/text/intro/about.htm>.

Zich, F 2020b, *Xanthostemon verticillatus (C.T.White & W.D.Francis) L.S.Sm.*, *Australian Tropical Rainforest Plants*, viewed 13 February 2021, <https://apps.lucidcentral.org/rainforest/text/entities/index.htm>.

Zich, F 2020c, *Zieria madida*, *Australian Tropical Rainforest Plants*, viewed 13 January 2021, <https://apps.lucidcentral.org/rainforest/text/entities/index.htm>.

DCCEEW (2023) "EPBC Protected Matters Search Tool" from http://www.environment.gov.au/epbc/pmst/index.html.

Appendix A Wildlife Online search results

Queensland Government

WildNet species list

Search Criteria: Species List for a Specified Point
Species: Plants (including other non-animals such as fungi and protists)
Type: All
Queensland status: All
Records: All
Date: All
Latitude: -16.2557
Longitude: 145.3908
Distance: 10
Email: mark@4ec.com.au
Date submitted: Tuesday 25 Jun 2024 10:14:40
Date extracted: Tuesday 25 Jun 2024 10:20:02

The number of records retrieved = 956

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Information about your Species lists request is logged for quality assurance, user support and product enhancement purposes only.
The information provided should be appropriately acknowledged as being derived from WildNet database when it is used. As the WildNet Program is still in a process of collating and vetting data, it is possible the information given is not complete. Go to the WildNet database webpage (https://www.qld.gov.au/environment/plants-animals/species-information/wildnet) to find out more about WildNet and where to access other WildNet information products approved for publication. Feedback about WildNet species lists should be emailed to wildlife.online@des.qld.gov.au.

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
chromists	Coscinodiscophyceae	Melosiraceae	*Melosira*					1/1
chromists	brown algae	Dictyotaceae	*Dictyotopsis propagulifera*			C		1/1
fungi	Agaricomycetes	Auriculariaceae	*Auricularia delicata*			C		1/1
fungi	Agaricomycetes	Ganodermataceae	*Ganoderma steyaertanum*			C		1/1
fungi	Agaricomycetes	Marasmiaceae	*Marasmius*					2/2
fungi	Agaricomycetes	Marasmiaceae	*Marasmius crinisequi*			C		4/4
fungi	Agaricomycetes	Mesophelliaceae	*Gummiglobus joyceae*			C		1/1
fungi	Agaricomycetes	Mycenaceae	*Panellus pusillus*			C		1/1
fungi	Agaricomycetes	Omphalotaceae	*Marasmiellus*					1/1
fungi	Agaricomycetes	Phallaceae	*Aseroe arachnoidea*			C		1/1
fungi	Agaricomycetes	Physalacriaceae	*Gloiocephala*					1/1
fungi	Agaricomycetes	Polyporaceae	*Lentinus*					1/1
fungi	Agaricomycetes	Polyporaceae	*Microporus xanthopus*			C		1/1
fungi	Agaricomycetes	Polyporaceae	*Panus*					1/1
fungi	Agaricomycetes	Polyporaceae	*Polyporus arcularius*			C		1/1
fungi	Agaricomycetes	Stereopsidaceae	*Stereopsis*					1/1
fungi	dothideomycetes	Aliquandostipitaceae	*Jahnula queenslandica*			C		1/1
fungi	dothideomycetes	Strigulaceae	*Strigula smaragdula*			C		1/1
fungi	lecanoromycetes	Caliciaceae	*Cratiria melanochlora*			C		1/1
fungi	lecanoromycetes	Graphidaceae	*Myriotrema rugiferum*			C		1/1
fungi	lecanoromycetes	Lecanoraceae	*Lecanora pangerangoensis*			C		1/1
fungi	lecanoromycetes	Pannariaceae	*Lepidocollema marianum*			C		1/1
fungi	lecanoromycetes	Parmeliaceae	*Parmotrema robustum*			C		2/2
fungi	lecanoromycetes	Parmeliaceae	*Parmotrema saccatilobum*			C		1/1
fungi	lecanoromycetes	Parmeliaceae	*Relicina circumnodata*			C		1/1
fungi	lecanoromycetes	Parmeliaceae	*Relicina sublanea*			C		1/1
fungi	lecanoromycetes	Parmeliaceae	*Usnea baileyi*			C		1/1
fungi	lecanoromycetes	Parmeliaceae	*Usnea nidifica*			C		3/3
fungi	lecanoromycetes	Porinaceae	*Porina elixiana*			C		1/1
fungi	lecanoromycetes	Porinaceae	*Porina papuensis*			C		1/1
fungi	lecanoromycetes	Ramalinaceae	*Ramalina confirmata*			C		1/1
fungi	lecanoromycetes	Ramalinaceae	*Ramalina subfraxinea var. subfraxinea*			C		3/3
fungi	lecanoromycetes	Ramalinaceae	*Ramalina tenella*			C		1/1
fungi	lecanoromycetes	Ramalinaceae	*Ramalina tropica*			C		4/4
plants	Ulvophyceae	Trentepohliaceae	*Trentepohlia arborum*			C		1/1
plants	land plants	Acanthaceae	*Acanthus ilicifolius*			C		1/1
plants	land plants	Acanthaceae	*Avicennia marina subsp. australasica*			C		1/1
plants	land plants	Acanthaceae	*Barleria strigosa*		Y			1/1
plants	land plants	Acanthaceae	*Brillantaisia lamium*		Y			1/1
plants	land plants	Acanthaceae	*Hygrophila angustifolia*			C		1/1
plants	land plants	Acanthaceae	*Pseuderanthemum variabile*	pastel flower		C		1/1
plants	land plants	Acanthaceae	*Strobilanthes alternata*		Y			4/4
plants	land plants	Acanthaceae	*Strobilanthes linearifolia*			C		4/4
plants	land plants	Acanthaceae	*Strobilanthes reptans*		Y			2/2
plants	land plants	Acanthaceae	*Thunbergia alata*	black-eyed Susan	Y			2/2
plants	land plants	Acanthaceae	*Thunbergia fragrans*		Y			2/2

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
plants	land plants	Achariaceae	*Ryparosa kurrangii*			NT		12/12
plants	land plants	Actinidiaceae	*Saurauia andreana*			C		2/2
plants	land plants	Alseuosmiaceae	*Crispiloba disperma*			C		4/4
plants	land plants	Amaranthaceae	*Alternanthera ficoidea*		Y			1/1
plants	land plants	Amaranthaceae	*Amaranthus viridis*	green amaranth	Y			1/1
plants	land plants	Amaranthaceae	*Gomphrena celosioides*	gomphrena weed	Y			1/1
plants	land plants	Anacardiaceae	*Blepharocarya involucrigera*			C		1/1
plants	land plants	Anacardiaceae	*Buchanania mangoides*			V		2/2
plants	land plants	Annonaceae	*Annona glabra*	pond apple	Y			2/2
plants	land plants	Annonaceae	*Cananga odorata*	Ylang-ylang		C		5/5
plants	land plants	Annonaceae	*Desmos goezeanus*			C		1/1
plants	land plants	Annonaceae	*Melodorum uhrii*			C		2/2
plants	land plants	Annonaceae	*Polyalthia xanthocarpa*			C		7/7
plants	land plants	Annonaceae	*Pseuduvaria froggattii*			C		8/8
plants	land plants	Annonaceae	*Xylopia maccreae*			C		2/2
plants	land plants	Apiaceae	*Centella asiatica*			C		2/2
plants	land plants	Apiaceae	*Mackinlaya confusa*			C		1/1
plants	land plants	Apocynaceae	*Allamanda cathartica*	yellow allamanda	Y			2/2
plants	land plants	Apocynaceae	*Alstonia muelleriana*	hard milkwood		C		4/4
plants	land plants	Apocynaceae	*Alstonia scholaris*	white cheesewood		C		2/2
plants	land plants	Apocynaceae	*Alyxia ilicifolia*			C		1/1
plants	land plants	Apocynaceae	*Alyxia spicata*			C		1/1
plants	land plants	Apocynaceae	*Cerbera floribunda*			C		4/4
plants	land plants	Apocynaceae	*Cerbera manghas*			C		1/1
plants	land plants	Apocynaceae	*Dischidia nummularia*	button orchid		C		2/2
plants	land plants	Apocynaceae	*Gymnanthera oblonga*			C		1/1
plants	land plants	Apocynaceae	*Gymnema longipedicellatum*			C		1/1
plants	land plants	Apocynaceae	*Hoya australis subsp. tenuipes*			C		3/3
plants	land plants	Apocynaceae	*Hoya pottsii*			C		3/3
plants	land plants	Apocynaceae	*Kopsia arborea*			C		1/1
plants	land plants	Apocynaceae	*Leichhardtia glandulifera*			C		2/2
plants	land plants	Apocynaceae	*Leichhardtia racemosa*			C		2/2
plants	land plants	Apocynaceae	*Melodinus acutiflorus*	bellbird vine		C		6/6
plants	land plants	Apocynaceae	*Melodinus australis*	southern melodinus		C		2/2
plants	land plants	Apocynaceae	*Parsonsia langiana*			C		4/4
plants	land plants	Apocynaceae	*Parsonsia latifolia*	green-leaved silkpod		C		2/2
plants	land plants	Aquifoliaceae	*Ilex arnhemensis subsp. ferdinandi*			C		3/3
plants	land plants	Araceae	*Colocasia esculenta*	taro	Y			1
plants	land plants	Araceae	*Pothos brassii*			C		3/3
plants	land plants	Araceae	*Syngonium podophyllum*		Y			1/1
plants	land plants	Araliaceae	*Polyscias australiana*	ivory basswood		C		2/2
plants	land plants	Araliaceae	*Polyscias elegans*	celery wood		C		1/1
plants	land plants	Araliaceae	*Polyscias macgillivrayi*			C		1/1
plants	land plants	Araliaceae	*Polyscias nodosa*			C		1/1
plants	land plants	Araliaceae	*Polyscias purpurea*			C		1/1
plants	land plants	Araliaceae	*Polyscias willmottii*			C		1/1

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
plants	land plants	Araliaceae	*Trachymene geraniifolia*			NT		3/3
plants	land plants	Arecaceae	*Calamus australis*	hairy Mary		C		1/1
plants	land plants	Arecaceae	*Calamus vitiensis*			C		3/3
plants	land plants	Arecaceae	*Laccospadix australasicus*	Atherton palm		C		1/1
plants	land plants	Arecaceae	*Licuala ramsayi var. ramsayi*			C		1/1
plants	land plants	Arecaceae	*Linospadix*					2/2
plants	land plants	Arecaceae	*Linospadix minor*			C		7/7
plants	land plants	Arecaceae	*Linospadix palmerianus*			NT		4/4
plants	land plants	Arecaceae	*Normanbya normanbyi*	black palm		C		7/7
plants	land plants	Arecaceae	*Ptychosperma elegans*	solitaire palm		C		1/1
plants	land plants	Argophyllaceae	*Argophyllum cryptophlebum*			NT		1/1
plants	land plants	Argophyllaceae	*Argophyllum iridescens*			V		1/1
plants	land plants	Aristolochiaceae	*Aristolochia acuminata*			C		1/1
plants	land plants	Aristolochiaceae	*Pararistolochia deltantha*			C		2/2
plants	land plants	Aspleniaceae	*Asplenium laserpitiifolium*	Johnstone River maidenhair		C		2/2
plants	land plants	Aspleniaceae	*Asplenium nidus*			C		1/1
plants	land plants	Aspleniaceae	*Asplenium simplicifrons*			C		2/2
plants	land plants	Aspleniaceae	*Hymenasplenium wildii*			V	V	3/3
plants	land plants	Asteraceae	*Acanthospermum hispidum*	star burr	Y			1/1
plants	land plants	Asteraceae	*Ageratum conyzoides subsp. conyzoides*		Y			1/1
plants	land plants	Asteraceae	*Blumea axillaris*			C		1/1
plants	land plants	Asteraceae	*Camptacra robusta*			C		1/1
plants	land plants	Asteraceae	*Coronidium rupicola*			C		1/1
plants	land plants	Asteraceae	*Cyanthillium cinereum*			C		1/1
plants	land plants	Asteraceae	*Eclipta prostrata*	white eclipta	Y			4/4
plants	land plants	Asteraceae	*Elephantopus mollis*	tobacco weed	Y			3/3
plants	land plants	Asteraceae	*Erigeron bonariensis*		Y			1/1
plants	land plants	Asteraceae	*Parthenium hysterophorus*	parthenium weed	Y			1/1
plants	land plants	Asteraceae	*Praxelis clematidea*		Y			1/1
plants	land plants	Asteraceae	*Sphaeromorphaea subintegra*			C		1/1
plants	land plants	Asteraceae	*Sphagneticola trilobata*		Y			4/2
plants	land plants	Asteraceae	*Synedrella nodiflora*		Y			3/3
plants	land plants	Asteraceae	*Tridax procumbens*	tridax daisy	Y			1/1
plants	land plants	Atherospermataceae	*Doryphora aromatica*			C		2/2
plants	land plants	Athyriaceae	*Diplazium dameriae*			C		2/2
plants	land plants	Athyriaceae	*Diplazium proliferum*			C		1/1
plants	land plants	Balanopaceae	*Balanops australiana*			C		4/4
plants	land plants	Begoniaceae	*Begonia hirtella*		Y			1/1
plants	land plants	Bignoniaceae	*Deplanchea tetraphylla*			C		1/1
plants	land plants	Bignoniaceae	*Pandorea nervosa*			C		1/1
plants	land plants	Bignoniaceae	*Saritaea magnifica*		Y			1/1
plants	land plants	Bignoniaceae	*Spathodea campanulata subsp. nilotica*		Y			1/1
plants	land plants	Blechnaceae	*Blechnum cartilagineum*	gristle fern		C		2/2
plants	land plants	Blechnaceae	*Blechnum medium*			SL		1/1
plants	land plants	Blechnaceae	*Blechnum orientale*			SL		2/2
plants	land plants	Blechnaceae	*Blechnum wurunuran*			SL		1/1

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
plants	land plants	Blechnaceae	*Stenochlaena palustris*	climbing swamp fern		SL		2/2
plants	land plants	Blechnaceae	*Telmatoblechnum indicum*			SL		1/1
plants	land plants	Boryaceae	*Borya septentrionalis*			C		6/6
plants	land plants	Bryaceae	*Rosulabryum albolimbatum*			C		1/1
plants	land plants	Burmanniaceae	*Gymnosiphon queenslandicus*			SL		1/1
plants	land plants	Byttneriaceae	*Commersonia macrostipulata*			C		3/3
plants	land plants	Byttneriaceae	*Kleinhovia hospita*			C		1/1
plants	land plants	Byttneriaceae	*Melochia corchorifolia*			C		2/2
plants	land plants	Calophyllaceae	*Calophyllum australianum*			C		1/1
plants	land plants	Calophyllaceae	*Kayea larnachiana*			V		7/7
plants	land plants	Calycanthaceae	*Idiospermum australiense*			C		12/12
plants	land plants	Calymperaceae	*Calymperes erosum*			C		3/3
plants	land plants	Calymperaceae	*Calymperes moluccense*			C		1/1
plants	land plants	Calymperaceae	*Leucophanes octoblepharoides*			C		1/1
plants	land plants	Calymperaceae	*Mitthyridium*					1/1
plants	land plants	Calymperaceae	*Mitthyridium fasciculatum*			C		1/1
plants	land plants	Calymperaceae	*Mitthyridium repens*			C		1/1
plants	land plants	Calymperaceae	*Syrrhopodon croceus*			C		1/1
plants	land plants	Calymperaceae	*Syrrhopodon semperi*			C		1/1
plants	land plants	Calymperaceae	*Syrrhopodon tristichus*			C		1/1
plants	land plants	Cannabaceae	*Trema cannabina*		Y			1/1
plants	land plants	Cannabaceae	*Trema tomentosa var. tomentosa*			C		2/2
plants	land plants	Cardiopteridaceae	*Cardiopteris moluccana*			SL		1/1
plants	land plants	Cardiopteridaceae	*Citronella smythii*			C		1/1
plants	land plants	Caryophyllaceae	*Drymaria cordata subsp. cordata*		Y			2/2
plants	land plants	Casuarinaceae	*Allocasuarina littoralis*			C		2/2
plants	land plants	Casuarinaceae	*Casuarina cunninghamiana subsp. cunninghamiana*			C		1/1
plants	land plants	Casuarinaceae	*Casuarina equisetifolia subsp. equisetifolia*			C		1/1
plants	land plants	Celastraceae	*Dinghoua globularis*			C		5/5
plants	land plants	Celastraceae	*Hedraianthera porphyropetala*	hedrianthera		C		5/5
plants	land plants	Celastraceae	*Hypsophila dielsiana*			C		1/1
plants	land plants	Celastraceae	*Salacia chinensis*			C		9/9
plants	land plants	Celastraceae	*Salacia disepala*			C		3/3
plants	land plants	Celastraceae	*Siphonodon membranaceus*			C		1/1
plants	land plants	Cleomaceae	*Tarenaya aculeata*		Y			1/1
plants	land plants	Clusiaceae	*Garcinia brassii*			C		6/6
plants	land plants	Clusiaceae	*Garcinia warrenii*			C		2/2
plants	land plants	Combretaceae	*Lumnitzera littorea*			C		5/5
plants	land plants	Combretaceae	*Terminalia arenicola*	beach almond		C		1/1
plants	land plants	Combretaceae	*Terminalia catappa*			C		1/1
plants	land plants	Combretaceae	*Terminalia muelleri*			C		1/1
plants	land plants	Combretaceae	*Terminalia sericocarpa*	damson		C		1/1
plants	land plants	Commelinaceae	*Floscopa scandens*			C		8/8
plants	land plants	Commelinaceae	*Murdannia nudiflora*		Y			1/1
plants	land plants	Commelinaceae	*Pollia macrophylla*			C		1/1
plants	land plants	Connaraceae	*Connarus conchocarpus subsp. conchocarpus*			C		1/1

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
plants	land plants	Connaraceae	*Rourea brachyandra*			C		2/2
plants	land plants	Convolvulaceae	*Camonea pilosa*			C		1/1
plants	land plants	Convolvulaceae	*Decalobanthus peltatus*			C		3/3
plants	land plants	Convolvulaceae	*Distimake dissectus*		Y			1/1
plants	land plants	Convolvulaceae	*Erycibe coccinea*			C		1/1
plants	land plants	Convolvulaceae	*Evolvulus alsinoides*			C		1/1
plants	land plants	Convolvulaceae	*Ipomoea indica*	blue morning-glory	Y			1/1
plants	land plants	Convolvulaceae	*Ipomoea littoralis*			C		1/1
plants	land plants	Convolvulaceae	*Operculina riedeliana*			C		2/2
plants	land plants	Costaceae	*Cheilocostus potierae*			E		1/1
plants	land plants	Costaceae	*Costus dubius*		Y			1/1
plants	land plants	Costaceae	*Tapeinochilos ananassae*			C		1/1
plants	land plants	Crassulaceae	*Bryophyllum pinnatum*	resurrection plant	Y			1/1
plants	land plants	Cucurbitaceae	*Neoalsomitra clavigera*			C		1/1
plants	land plants	Cucurbitaceae	*Trichosanthes odontosperma*			C		1/1
plants	land plants	Cunoniaceae	*Ceratopetalum iugumensis*			C		2/2
plants	land plants	Cunoniaceae	*Davidsonia pruriens*			C		2/2
plants	land plants	Cunoniaceae	*Gillbeea whypallana*			C		3/3
plants	land plants	Cunoniaceae	*Pseudoweinmannia apetala*			C		1/1
plants	land plants	Cunoniaceae	*Pullea stutzeri*	hard alder		C		1/1
plants	land plants	Cyatheaceae	*Alsophila rebeccae*			C		1/1
plants	land plants	Cyatheaceae	*Sphaeropteris cooperi*			C		1/1
plants	land plants	Cyperaceae	*Actinoscirpus grossus*			C		1/1
plants	land plants	Cyperaceae	*Bulbostylis densa*			C		1/1
plants	land plants	Cyperaceae	*Carex horsfieldii*			C		2/2
plants	land plants	Cyperaceae	*Carex indica*			C		1/1
plants	land plants	Cyperaceae	*Carex maculata*			C		2/2
plants	land plants	Cyperaceae	*Carex rafflesiana*			C		2/2
plants	land plants	Cyperaceae	*Cyperus aromaticus*		Y			4/4
plants	land plants	Cyperaceae	*Cyperus brevifolius*	Mullumbimby couch	Y			1/1
plants	land plants	Cyperaceae	*Cyperus compressus*		Y			1/1
plants	land plants	Cyperaceae	*Cyperus cyperinus*			C		1/1
plants	land plants	Cyperaceae	*Cyperus digitatus*			C		2/2
plants	land plants	Cyperaceae	*Cyperus distans*			C		3/3
plants	land plants	Cyperaceae	*Cyperus javanicus*			C		1/1
plants	land plants	Cyperaceae	*Cyperus mindorensis*		Y			4/4
plants	land plants	Cyperaceae	*Cyperus odoratus*			C		1/1
plants	land plants	Cyperaceae	*Cyperus pilosus*			C		2/2
plants	land plants	Cyperaceae	*Cyperus sphacelatus*		Y			5/5
plants	land plants	Cyperaceae	*Cyperus stoloniferus*			C		1/1
plants	land plants	Cyperaceae	*Cyperus trinervis*			C		2/2
plants	land plants	Cyperaceae	*Eleocharis geniculata*			C		1/1
plants	land plants	Cyperaceae	*Eleocharis nuda*			C		1/1
plants	land plants	Cyperaceae	*Exocarya scleroides*			C		2/2
plants	land plants	Cyperaceae	*Fimbristylis acicularis*			C		2/2
plants	land plants	Cyperaceae	*Fimbristylis dichotoma*	common fringe-rush		C		2/2

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plants	land plants	Cyperaceae	*Fimbristylis ferruginea*			C		1/1
plants	land plants	Cyperaceae	*Fimbristylis littoralis*			C		3/3
plants	land plants	Cyperaceae	*Fimbristylis pauciflora*			C		1/1
plants	land plants	Cyperaceae	*Fimbristylis schoenoides*			C		3/3
plants	land plants	Cyperaceae	*Gahnia sieberiana*	sword grass		C		2/2
plants	land plants	Cyperaceae	*Hypolytrum compactum*			C		2/2
plants	land plants	Cyperaceae	*Hypolytrum nemorum*			C		10/10
plants	land plants	Cyperaceae	*Lepidosperma laterale*			C		2/2
plants	land plants	Cyperaceae	*Machaerina rubiginosa*			C		2/2
plants	land plants	Cyperaceae	*Mapania macrocephala*			C		4/4
plants	land plants	Cyperaceae	*Paramapania parvibractea*			V		2/2
plants	land plants	Cyperaceae	*Rhynchospora brownii*	beak rush		C		2/2
plants	land plants	Cyperaceae	*Rhynchospora corymbosa*			C		9/9
plants	land plants	Cyperaceae	*Rhynchospora leae*			C		2/2
plants	land plants	Cyperaceae	*Rhynchospora rubra*			C		3/3
plants	land plants	Cyperaceae	*Schoenus calostachyus*			C		4/4
plants	land plants	Cyperaceae	*Schoenus sparteus*			C		3/3
plants	land plants	Cyperaceae	*Scirpodendron ghaeri*			C		3/3
plants	land plants	Cyperaceae	*Scleria ciliaris*			C		1/1
plants	land plants	Cyperaceae	*Scleria corymbosa*			C		1/1
plants	land plants	Cyperaceae	*Scleria levis*			C		2/2
plants	land plants	Cyperaceae	*Scleria polycarpa*			C		3/3
plants	land plants	Cyperaceae	*Scleria scrobiculata*			C		2/2
plants	land plants	Cyperaceae	*Scleria sumatrensis*			C		1/1
plants	land plants	Cyperaceae	*Scleria terrestris*			C		1/1
plants	land plants	Davalliaceae	*Davallia denticulata*			C		1/1
plants	land plants	Davalliaceae	*Davallia repens*			C		1/1
plants	land plants	Dennstaedtiaceae	*Hypolepis tenuifolia*			C		1/1
plants	land plants	Dennstaedtiaceae	*Microlepia speluncae*	cave fern		C		1/1
plants	land plants	Dichapetalaceae	*Dichapetalum papuanum*			C		1/1
plants	land plants	Dicranaceae	*Eucamptodon scalarirete*			C		1/1
plants	land plants	Dilleniaceae	*Dillenia alata*			C		4/4
plants	land plants	Dilleniaceae	*Hibbertia banksii forma banksii*			C		1/1
plants	land plants	Dilleniaceae	*Hibbertia scandens*			C		1/1
plants	land plants	Dilleniaceae	*Tetracera daemeliana*			C		1/1
plants	land plants	Dilleniaceae	*Tetracera nordtiana var. moluccana*			C		1/1
plants	land plants	Dilleniaceae	*Tetracera nordtiana var. nordtiana*			C		3/3
plants	land plants	Dilleniaceae	*Tetracera nordtiana var. wuthiana*			C		1/1
plants	land plants	Dioscoreaceae	*Dioscorea transversa*	native yam		C		1/1
plants	land plants	Dracaenaceae	*Dracaena angustifolia*			C		3/3
plants	land plants	Dracaenaceae	*Dracaena fragrans*		Y			1/1
plants	land plants	Droseraceae	*Drosera spatulata*			SL		1/1
plants	land plants	Dryopteridaceae	*Bolbitis taylorii*			SL		2/2
plants	land plants	Dryopteridaceae	*Lastreopsis poecilophlebia*			SL		1/1
plants	land plants	Dryopteridaceae	*Lastreopsis wurunuran*			SL		1/1
plants	land plants	Dryopteridaceae	*Teratophyllum brightiae*			SL		1/1

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plants	land plants	Ebenaceae	*Diospyros laurina*			C		2/2
plants	land plants	Ebenaceae	*Diospyros pluviatilis*			C		1/1
plants	land plants	Ebenaceae	*Diospyros uvida*			C		2/2
plants	land plants	Elaeocarpaceae	*Aceratium concinnum*			C		2/2
plants	land plants	Elaeocarpaceae	*Aceratium megalospermum*			C		10/10
plants	land plants	Elaeocarpaceae	*Elaeocarpus*					1/1
plants	land plants	Elaeocarpaceae	*Elaeocarpus bancroftii*			C		7/7
plants	land plants	Elaeocarpaceae	*Elaeocarpus elliffii*			C		1/1
plants	land plants	Elaeocarpaceae	*Elaeocarpus ferruginiflorus*			C		4/4
plants	land plants	Elaeocarpaceae	*Elaeocarpus foveolatus*			C		4/4
plants	land plants	Elaeocarpaceae	*Elaeocarpus grahamii*			C		5/5
plants	land plants	Elaeocarpaceae	*Elaeocarpus grandis*	blue quandong		C		3/3
plants	land plants	Elaeocarpaceae	*Elaeocarpus hylobroma*			C		2/2
plants	land plants	Elaeocarpaceae	*Elaeocarpus johnsonii*	Kuranda quandong		C		1/1
plants	land plants	Elaeocarpaceae	*Elaeocarpus michaelii*			C		11/10
plants	land plants	Elaeocarpaceae	*Elaeocarpus sp. (Windsor Tableland L.W.Jessup+ GJM1378)*			C		2/2
plants	land plants	Elaeocarpaceae	*Elaeocarpus stellaris*			C		1/1
plants	land plants	Elaeocarpaceae	*Sloanea langii*			C		1/1
plants	land plants	Ericaceae	*Acrothamnus spathaceus*			C		3/3
plants	land plants	Ericaceae	*Trochocarpa bellendenkerensis*			C		3/3
plants	land plants	Eriocaulaceae	*Eriocaulon athertonense*			C		1/1
plants	land plants	Eriocaulaceae	*Eriocaulon australe*			C		1/1
plants	land plants	Eriocaulaceae	*Eriocaulon willdenovianum*			C		1/1
plants	land plants	Escalloniaceae	*Polyosma hirsuta*			C		1/1
plants	land plants	Escalloniaceae	*Polyosma rigidiuscula*			C		1/1
plants	land plants	Euphorbiaceae	*Alchornea thozetiana*			C		1/1
plants	land plants	Euphorbiaceae	*Aleurites rockinghamensis*			C		2/2
plants	land plants	Euphorbiaceae	*Claoxylon tenerifolium subsp. boreale*			C		1/1
plants	land plants	Euphorbiaceae	*Codiaeum variegatum var. moluccanum*			C		1/1
plants	land plants	Euphorbiaceae	*Croton triacros*			C		3/3
plants	land plants	Euphorbiaceae	*Endospermum myrmecophilum*	endospermum		C		1/1
plants	land plants	Euphorbiaceae	*Euphorbia heterophylla*		Y			1/1
plants	land plants	Euphorbiaceae	*Euphorbia hirta*		Y			1/1
plants	land plants	Euphorbiaceae	*Excoecaria agallocha*	milky mangrove		C		3/3
plants	land plants	Euphorbiaceae	*Macaranga involucrata var. mallotoides*			C		3/3
plants	land plants	Euphorbiaceae	*Macaranga polyadenia*			C		4/4
plants	land plants	Euphorbiaceae	*Macaranga subdentata*			C		1/1
plants	land plants	Euphorbiaceae	*Mallotus mollissimus*			C		1/1
plants	land plants	Euphorbiaceae	*Mallotus paniculatus*			C		3/3
plants	land plants	Euphorbiaceae	*Manihot esculenta*		Y			1/1
plants	land plants	Eupomatiaceae	*Eupomatia laurina*	bolwarra		C		1/1
plants	land plants	Fissidentaceae	*Fissidens oblongifolius*			C		2/2
plants	land plants	Fissidentaceae	*Fissidens pellucidus*			C		1/1
plants	land plants	Flagellariaceae	*Flagellaria indica*	whip vine		C		3/3
plants	land plants	Gentianaceae	*Fagraea cambagei*			C		8/8

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plants	land plants	Gesneriaceae	*Lenbrassia australiana var. australiana*			SL		1/1
plants	land plants	Gesneriaceae	*Lenbrassia australiana var. glabrescens*			SL		7/7
plants	land plants	Gleicheniaceae	*Dicranopteris linearis var. altissima*			C		1/1
plants	land plants	Gleicheniaceae	*Dicranopteris linearis var. linearis*			C		1/1
plants	land plants	Gleicheniaceae	*Gleichenia dicarpa*	pouched coral fern		C		1/1
plants	land plants	Goodeniaceae	*Goodenia mystrophylla*			C		1/1
plants	land plants	Goodeniaceae	*Scaevola enantophylla*			C		1/1
plants	land plants	Haloragaceae	*Gonocarpus acanthocarpus*			C		1/1
plants	land plants	Hamamelidaceae	*Neostrearia fleckeri*			NT		3/3
plants	land plants	Hernandiaceae	*Hernandia albiflora*			C		18/18
plants	land plants	Hernandiaceae	*Hernandia nymphaeifolia*			C		1/1
plants	land plants	Hydrocharitaceae	*Blyxa aubertii*			SL		1/1
plants	land plants	Hydrocharitaceae	*Vallisneria*					2/1
plants	land plants	Hydrocharitaceae	*Vallisneria erecta*			SL		3/3
plants	land plants	Hymenophyllaceae	*Abrodictyum obscurum*			SL		1/1
plants	land plants	Hymenophyllaceae	*Cephalomanes atrovirens*			SL		4/4
plants	land plants	Hymenophyllaceae	*Crepidomanes aphlebioides*			CR		2/2
plants	land plants	Hymenophyllaceae	*Crepidomanes barnardianum*			SL		3/3
plants	land plants	Hymenophyllaceae	*Crepidomanes bipunctatum*			SL		6/6
plants	land plants	Hymenophyllaceae	*Crepidomanes humile*			SL		3/3
plants	land plants	Hymenophyllaceae	*Crepidomanes kurzii*			SL		1/1
plants	land plants	Hymenophyllaceae	*Crepidomanes proliferum*			SL		1/1
plants	land plants	Hymenophyllaceae	*Crepidomanes saxifragoides*			SL		1/1
plants	land plants	Hymenophyllaceae	*Didymoglossum bimarginatum*			SL		3/3
plants	land plants	Hymenophyllaceae	*Didymoglossum motleyi*			SL		2/2
plants	land plants	Hymenophyllaceae	*Hymenophyllum kerianum*			V		1/1
plants	land plants	Hymenophyllaceae	*Hymenophyllum pallidum*			NT		1/1
plants	land plants	Hymenophyllaceae	*Vandenboschia johnstonensis*			SL		3/3
plants	land plants	Hypnaceae	*Hypnaceae*					1/1
plants	land plants	Iridaceae	*Geosiris australiensis*			C		2/2
plants	land plants	Lamiaceae	*Clerodendrum floribundum*			C		1/1
plants	land plants	Lamiaceae	*Clerodendrum inerme*	coastal lolly bush		C		2/2
plants	land plants	Lamiaceae	*Clerodendrum paniculatum*		Y			2/2
plants	land plants	Lamiaceae	*Clerodendrum tracyanum*			C		4/4
plants	land plants	Lamiaceae	*Gmelina dalrympleana*			C		3/3
plants	land plants	Lamiaceae	*Gmelina fasciculiflora*			C		1/1
plants	land plants	Lamiaceae	*Hyptis capitata*		Y			5/5
plants	land plants	Lamiaceae	*Mesosphaerum pectinatum*		Y			6/6
plants	land plants	Lamiaceae	*Orthosiphon aristatus*			C		1/1
plants	land plants	Lamiaceae	*Premna serratifolia*			C		3/3
plants	land plants	Lamiaceae	*Vitex queenslandica*			C		2/2
plants	land plants	Lamiaceae	*Vitex rotundifolia*			C		1/1
plants	land plants	Lamiaceae	*Vitex trifolia var. trifolia*			C		1/1
plants	land plants	Lauraceae	*Beilschmiedia bancroftii*			C		8/8
plants	land plants	Lauraceae	*Beilschmiedia castrisinensis*			NT		10/10
plants	land plants	Lauraceae	*Beilschmiedia obtusifolia*	hard bolly gum		C		1/1

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plants	land plants	Lauraceae	*Beilschmiedia tooram*			C		3/3
plants	land plants	Lauraceae	*Beilschmiedia volckii*	Boonjee blush walnut		C		2/2
plants	land plants	Lauraceae	*Cryptocarya angulata*	ivory laurel		C		3/3
plants	land plants	Lauraceae	*Cryptocarya corrugata*			C		2/2
plants	land plants	Lauraceae	*Cryptocarya densiflora*			C		2/2
plants	land plants	Lauraceae	*Cryptocarya grandis*			C		6/6
plants	land plants	Lauraceae	*Cryptocarya laevigata*			C		5/5
plants	land plants	Lauraceae	*Cryptocarya leucophylla*			C		2/2
plants	land plants	Lauraceae	*Cryptocarya mackinnoniana*			C		1/1
plants	land plants	Lauraceae	*Cryptocarya murrayi*	Murray's laurel		C		2/2
plants	land plants	Lauraceae	*Cryptocarya oblata*			C		6/6
plants	land plants	Lauraceae	*Cryptocarya saccharata*			C		1/1
plants	land plants	Lauraceae	*Endiandra acuminata*			C		2/2
plants	land plants	Lauraceae	*Endiandra bessaphila*			C		1/1
plants	land plants	Lauraceae	*Endiandra compressa*			C		3/3
plants	land plants	Lauraceae	*Endiandra cooperana*			E	E	4/4
plants	land plants	Lauraceae	*Endiandra dielsiana*			C		1/1
plants	land plants	Lauraceae	*Endiandra glauca*			C		7/7
plants	land plants	Lauraceae	*Endiandra grayi*			V		7/7
plants	land plants	Lauraceae	*Endiandra hypotephra*	blue walnut		C		6/6
plants	land plants	Lauraceae	*Endiandra insignis*			C		6/6
plants	land plants	Lauraceae	*Endiandra leptodendron*			C		3/3
plants	land plants	Lauraceae	*Endiandra longipedicellata*			C		1/1
plants	land plants	Lauraceae	*Endiandra microneura*			NT		13/13
plants	land plants	Lauraceae	*Endiandra monothyra subsp. monothyra*			C		1/1
plants	land plants	Lauraceae	*Endiandra montana*			C		1/1
plants	land plants	Lauraceae	*Endiandra sankeyana*	Sankey's walnut		C		1/1
plants	land plants	Lauraceae	*Endiandra wolfei*			C		8/8
plants	land plants	Lauraceae	*Lindera queenslandica*			C		1/1
plants	land plants	Lauraceae	*Litsea bindoniana*			C		1/1
plants	land plants	Lauraceae	*Litsea breviumbellata*			C		1/1
plants	land plants	Lauraceae	*Litsea leefeana*			C		5/5
plants	land plants	Lauraceae	*Neolitsea dealbata*	white bolly gum		C		1/1
plants	land plants	Laxmanniaceae	*Cordyline cannifolia*			SL		4/4
plants	land plants	Laxmanniaceae	*Eustrephus latifolius*	wombat berry		C		1/1
plants	land plants	Lecythidaceae	*Barringtonia racemosa*			C		4/3
plants	land plants	Lecythidaceae	*Planchonia careya*	cockatoo apple		C		1/1
plants	land plants	Leguminosae	*Acacia celsa*			C		1/1
plants	land plants	Leguminosae	*Acacia cincinnata*			C		3/3
plants	land plants	Leguminosae	*Acacia crassicarpa*			C		1/1
plants	land plants	Leguminosae	*Acacia leptocarpa*	north coast wattle		C		1/1
plants	land plants	Leguminosae	*Acacia mangium*			C		4/4
plants	land plants	Leguminosae	*Acacia polystachya*			C		1/1
plants	land plants	Leguminosae	*Acacia pubirhachis*			C		2/2
plants	land plants	Leguminosae	*Albizia sp. (Windsor Tableland B.Gray 2181)*			C		1/1
plants	land plants	Leguminosae	*Arachis pintoi*		Y			1/1

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plants	land plants	Leguminosae	*Archidendron kanisii*			V		5/3
plants	land plants	Leguminosae	*Archidendron lucyi*			C		4/4
plants	land plants	Leguminosae	*Archidendron ramiflorum*			C		2/2
plants	land plants	Leguminosae	*Archidendron vaillantii*	salmon bean		C		1/1
plants	land plants	Leguminosae	*Austrocallerya australis*			C		7/4
plants	land plants	Leguminosae	*Austrosteenisia stipularis*			C		2/2
plants	land plants	Leguminosae	*Centrosema molle*		Y			1/1
plants	land plants	Leguminosae	*Chamaecrista rotundifolia var. rotundifolia*		Y			1/1
plants	land plants	Leguminosae	*Crotalaria goreensis*	gambia pea	Y			1/1
plants	land plants	Leguminosae	*Cynometra iripa*			C		3/3
plants	land plants	Leguminosae	*Dalbergia candenatensis*			C		4/4
plants	land plants	Leguminosae	*Dalbergia densa*			C		1/1
plants	land plants	Leguminosae	*Derris*					2/2
plants	land plants	Leguminosae	*Derris trifoliata*			C		2/1
plants	land plants	Leguminosae	*Dioclea hexandra*			E		9/9
plants	land plants	Leguminosae	*Entada phaseoloides*	matchbox bean		C		3/3
plants	land plants	Leguminosae	*Erythrina fusca*			C		2/2
plants	land plants	Leguminosae	*Erythrina variegata*	Indian coral tree		C		1/1
plants	land plants	Leguminosae	*Glycine tomentella*	woolly glycine		C		1/1
plants	land plants	Leguminosae	*Heliodendron xanthoxylon*	yellow siris		NT		4/4
plants	land plants	Leguminosae	*Indigofera hirsuta*	hairy indigo		C		2/2
plants	land plants	Leguminosae	*Inga*					1
plants	land plants	Leguminosae	*Intsia bijuga*			C		4/4
plants	land plants	Leguminosae	*Mezoneuron scortechinii*			C		1/1
plants	land plants	Leguminosae	*Millettia pinnata*			C		3/3
plants	land plants	Leguminosae	*Mimosa diplotricha var. diplotricha*	giant sensitive plant	Y			1/1
plants	land plants	Leguminosae	*Mimosa pudica var. unijuga*		Y			2/2
plants	land plants	Leguminosae	*Mucuna gigantea*	burny bean		C		1/1
plants	land plants	Leguminosae	*Ormosia ormondii*			C		6/6
plants	land plants	Leguminosae	*Samanea saman*		Y			1/1
plants	land plants	Leguminosae	*Senna alata*		Y			1/1
plants	land plants	Leguminosae	*Senna obtusifolia*		Y			1/1
plants	land plants	Leguminosae	*Senna occidentalis*	coffee senna	Y			1/1
plants	land plants	Leguminosae	*Senna pendula var. glabrata*	Easter cassia	Y			1/1
plants	land plants	Leguminosae	*Senna siamea*		Y			1/1
plants	land plants	Leguminosae	*Senna tora*		Y			1/1
plants	land plants	Leguminosae	*Sophora tomentosa subsp. australis*			C		2/2
plants	land plants	Leguminosae	*Storckiella australiensis*			C		6/6
plants	land plants	Leguminosae	*Strongylodon lucidus*			NT		3/3
plants	land plants	Leguminosae	*Stylosanthes humilis*	Townsville stylo	Y			1/1
plants	land plants	Leguminosae	*Stylosanthes viscosa*		Y			1/1
plants	land plants	Leguminosae	*Ticanto crista*			C		1/1
plants	land plants	Leguminosae	*Vigna marina*	dune bean		C		1/1
plants	land plants	Leguminosae	*Zornia maritima*			C		1/1
plants	land plants	Lentibulariaceae	*Utricularia caerulea*	blue bladderwort		SL		1/1
plants	land plants	Lentibulariaceae	*Utricularia uliginosa*	asian bladderwort		SL		2/2

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plants	land plants	Lepidoziaceae	*Bazzania amblyphylla*			C		1/1
plants	land plants	Lepidoziaceae	*Bazzania citharodes*			C		3/3
plants	land plants	Lepidoziaceae	*Bazzania filiformis*			C		1/1
plants	land plants	Lepidoziaceae	*Bazzania gamscottii*			C		1/1
plants	land plants	Lepidoziaceae	*Bazzania intermedia*			C		1/1
plants	land plants	Lepidoziaceae	*Bazzania mittenii*			C		1/1
plants	land plants	Lepidoziaceae	*Bazzania sauropoda*			C		2/2
plants	land plants	Lepidoziaceae	*Bazzania vittata*			C		1/1
plants	land plants	Leucobryaceae	*Leucobryum*					1/1
plants	land plants	Linaceae	*Hugonia jenkinsii*			C		1/1
plants	land plants	Linderniaceae	*Bonnaya antipoda*			C		1/1
plants	land plants	Linderniaceae	*Torenia anagallis*			C		1/1
plants	land plants	Lindsaeaceae	*Lindsaea brachypoda*			C		4/4
plants	land plants	Lindsaeaceae	*Lindsaea ensifolia subsp. agatii*			C		1/1
plants	land plants	Lindsaeaceae	*Lindsaea ensifolia subsp. ensifolia*			C		1/1
plants	land plants	Lindsaeaceae	*Lindsaea media*			C		1/1
plants	land plants	Lindsaeaceae	*Lindsaea obtusa*			C		7/7
plants	land plants	Lindsaeaceae	*Lindsaea repens var. sessilis*			C		1/1
plants	land plants	Lindsaeaceae	*Lindsaea terrae-reginae*			E		1/1
plants	land plants	Loganiaceae	*Geniostoma rupestre var. australianum*			C		1/1
plants	land plants	Loganiaceae	*Mitrasacme oasena*			C		1/1
plants	land plants	Lomariopsidaceae	*Lomariopsis kingii*			C		1/1
plants	land plants	Lophocoleaceae	*Conoscyphus trapezioides*			C		1/1
plants	land plants	Loranthaceae	*Amyema conspicua subsp. conspicua*			C		2/2
plants	land plants	Loranthaceae	*Amyema quaternifolia*			C		9/8
plants	land plants	Loranthaceae	*Amyema whitei*			C		1/1
plants	land plants	Loranthaceae	*Amylotheca dictyophleba*			C		7/7
plants	land plants	Loranthaceae	*Decaisnina congesta*			C		2/2
plants	land plants	Loranthaceae	*Dendrophthoe curvata*			C		1/1
plants	land plants	Loranthaceae	*Diplatia tomentosa*			C		1/1
plants	land plants	Lycopodiaceae	*Palhinhaea cernua*			C		1/1
plants	land plants	Lycopodiaceae	*Phlegmariurus harmsii*			SL		1/1
plants	land plants	Lycopodiaceae	*Phlegmariurus phlegmarioides*			V		1/1
plants	land plants	Lygodiaceae	*Lygodium microphyllum*	snake fern		C		1/1
plants	land plants	Lygodiaceae	*Lygodium reticulatum*			C		5/5
plants	land plants	Lythraceae	*Sonneratia alba*			C		3/2
plants	land plants	Lythraceae	*Sonneratia caseolaris*			C		2/1
plants	land plants	Lythraceae	*Sonneratia x gulngai*			C		1/1
plants	land plants	Maesaceae	*Maesa dependens var. pubescens*			C		2/2
plants	land plants	Malpighiaceae	*Tristellateia australasiae*			NT		1/1
plants	land plants	Malvaceae	*Hibiscus tiliaceus*	cotton tree		C		1/1
plants	land plants	Malvaceae	*Sida acuta*	spinyhead sida	Y			1/1
plants	land plants	Malvaceae	*Thespesia*					1
plants	land plants	Malvaceae	*Thespesia populnea*			C		1/1
plants	land plants	Malvaceae	*Urena lobata*	urena weed	Y			2/2
plants	land plants	Marantaceae	*Ctenanthe setosa*		Y			1/1

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plants	land plants	Marattiaceae	*Angiopteris evecta*	giant fern		C		1/1
plants	land plants	Marsileaceae	*Marsilea mutica*	shiny nardoo		C		1/1
plants	land plants	Melastomataceae	*Heterotis rotundifolia*		Y			3/3
plants	land plants	Melastomataceae	*Medinilla balls-headleyi*			C		3/3
plants	land plants	Melastomataceae	*Melastoma cyanoides*			C		2/2
plants	land plants	Melastomataceae	*Melastoma malabathricum subsp. malabathricum*			C		2/2
plants	land plants	Melastomataceae	*Memecylon pauciflorum*			C		1/1
plants	land plants	Melastomataceae	*Miconia nervosa*		Y			1/1
plants	land plants	Melastomataceae	*Tristemma mauritianum var. mauritianum*		Y			4/4
plants	land plants	Meliaceae	*Aglaia ferruginea*			C		1/1
plants	land plants	Meliaceae	*Aglaia sapindina*			C		4/4
plants	land plants	Meliaceae	*Didymocheton gaudichaudianus*			C		2/2
plants	land plants	Meliaceae	*Didymocheton muelleri*			C		1/1
plants	land plants	Meliaceae	*Didymocheton papuanus*			C		1/1
plants	land plants	Meliaceae	*Didymocheton pettigrewianus*			C		1/1
plants	land plants	Meliaceae	*Goniocheton arborescens*			C		3/3
plants	land plants	Meliaceae	*Prasoxylon alliaceum*			C		2/2
plants	land plants	Meliaceae	*Prasoxylon klanderi*			C		4/4
plants	land plants	Meliaceae	*Xylocarpus granatum*	cedar mangrove		C		2/2
plants	land plants	Menispermaceae	*Carronia protensa*			C		2/2
plants	land plants	Menispermaceae	*Hypserpa decumbens*			C		3/3
plants	land plants	Menispermaceae	*Hypserpa laurina*			C		5/5
plants	land plants	Menispermaceae	*Parapachygone longifolia*			C		2/2
plants	land plants	Molluginaceae	*Glinus oppositifolius*			C		2/2
plants	land plants	Monimiaceae	*Austromatthaea elegans*			C		2/2
plants	land plants	Monimiaceae	*Hedycarya loxocarya*			C		3/3
plants	land plants	Monimiaceae	*Palmeria hypotephra*			C		1/1
plants	land plants	Monimiaceae	*Palmeria scandens*	anchor vine		C		1/1
plants	land plants	Monimiaceae	*Steganthera laxiflora subsp. laxiflora*			C		1/1
plants	land plants	Monimiaceae	*Steganthera macooraia*			C		2/2
plants	land plants	Monimiaceae	*Wilkiea longipes*			C		3/3
plants	land plants	Monimiaceae	*Wilkiea pubescens*			C		1/1
plants	land plants	Monimiaceae	*Wilkiea sp. (McDowall Range J.G.Tracey 14552)*			NT		1/1
plants	land plants	Moraceae	*Artocarpus altilis*	breadfruit	Y			1/1
plants	land plants	Moraceae	*Artocarpus heterophyllus*		Y			2/2
plants	land plants	Moraceae	*Ficus adenosperma*			C		1/1
plants	land plants	Moraceae	*Ficus benjamina*			C		1/1
plants	land plants	Moraceae	*Ficus congesta var. congesta*			C		2/2
plants	land plants	Moraceae	*Ficus copiosa*			C		1/1
plants	land plants	Moraceae	*Ficus mollior var. mollior*			C		1/1
plants	land plants	Moraceae	*Ficus pantoniana*			C		2/2
plants	land plants	Moraceae	*Ficus septica*			C		4/4
plants	land plants	Moraceae	*Ficus triradiata*			C		2/2
plants	land plants	Moraceae	*Ficus variegata var. variegata*			C		1/1
plants	land plants	Moraceae	*Ficus virgata var. virgata*			C		2/2
plants	land plants	Musaceae	*Musa banksii*			C		3/3

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plants	land plants	Myristicaceae	*Myristica globosa subsp. muelleri*	native nugmeg		C		3/3
plants	land plants	Myristicaceae	*Myristica insipida var. cimicifera*			C		2/2
plants	land plants	Myrsinaceae	*Aegiceras corniculatum*	river mangrove		C		1/1
plants	land plants	Myrsinaceae	*Ardisia brevipedata*			C		1/1
plants	land plants	Myrsinaceae	*Ardisia pachyrrhachis*			C		3/3
plants	land plants	Myrsinaceae	*Embelia australiana*	embelia		C		1/1
plants	land plants	Myrsinaceae	*Embelia caulialata*			C		3/3
plants	land plants	Myrsinaceae	*Myrsine oreophila*			C		1/1
plants	land plants	Myrsinaceae	*Myrsine porosa*			C		2/2
plants	land plants	Myrsinaceae	*Myrsine urceolata*			C		1/1
plants	land plants	Myrtaceae	*Acmena divaricata*			C		4/4
plants	land plants	Myrtaceae	*Acmena graveolens*			C		4/4
plants	land plants	Myrtaceae	*Acmena hemilampra subsp. hemilampra*			C		7/7
plants	land plants	Myrtaceae	*Acmena hemilampra subsp. orophila*			C		3/3
plants	land plants	Myrtaceae	*Acmenosperma claviflorum*	grey satinash		C		2/2
plants	land plants	Myrtaceae	*Archirhodomyrtus beckleri*	rose myrtle		C		4/4
plants	land plants	Myrtaceae	*Backhousia hughesii*			C		2/2
plants	land plants	Myrtaceae	*Corymbia intermedia*	pink bloodwood		C		1/1
plants	land plants	Myrtaceae	*Eucalyptus crebra*	narrow-leaved red ironbark		C		1/1
plants	land plants	Myrtaceae	*Eucalyptus pellita*	large-fruited red mahogany		C		2/2
plants	land plants	Myrtaceae	*Gossia shepherdii*			C		1/1
plants	land plants	Myrtaceae	*Lindsayomyrtus racemoides*			C		16/16
plants	land plants	Myrtaceae	*Lithomyrtus obtusa*			C		1/1
plants	land plants	Myrtaceae	*Melaleuca cajuputi subsp. platyphylla*			C		7/7
plants	land plants	Myrtaceae	*Melaleuca leucadendra*	broad-leaved tea-tree		C		2/2
plants	land plants	Myrtaceae	*Melaleuca quinquenervia*	swamp paperbark		C		2/2
plants	land plants	Myrtaceae	*Melaleuca viminalis*			C		1/1
plants	land plants	Myrtaceae	*Melaleuca viridiflora*			C		1/1
plants	land plants	Myrtaceae	*Melaleuca viridiflora var. viridiflora*			C		3/3
plants	land plants	Myrtaceae	*Mitrantia bilocularis*			CR	CE	15/15
plants	land plants	Myrtaceae	*Pilidiostigma papuanum*			C		2/2
plants	land plants	Myrtaceae	*Rhodamnia sessiliflora*			E		2/2
plants	land plants	Myrtaceae	*Rhodomyrtus effusa*			E		14/14
plants	land plants	Myrtaceae	*Rhodomyrtus macrocarpa*	finger cherry		C		1/1
plants	land plants	Myrtaceae	*Rhodomyrtus pervagata*			E		1/1
plants	land plants	Myrtaceae	*Rhodomyrtus sericea*			C		1/1
plants	land plants	Myrtaceae	*Ristantia pachysperma*	yellow penda		C		5/5
plants	land plants	Myrtaceae	*Sphaerantia*			C		1/1
plants	land plants	Myrtaceae	*Sphaerantia discolor*	Tully penda		V		1/1
plants	land plants	Myrtaceae	*Syzygium angophoroides*			C		6/6
plants	land plants	Myrtaceae	*Syzygium apodophyllum*			C		3/3
plants	land plants	Myrtaceae	*Syzygium cormiflorum*	bumpy satinash		C		7/7
plants	land plants	Myrtaceae	*Syzygium cryptophlebium*			C		4/4
plants	land plants	Myrtaceae	*Syzygium erythrocalyx*	scarlet satinash		C		1/1
plants	land plants	Myrtaceae	*Syzygium fibrosum*	fibrous satinash		C		5/5
plants	land plants	Myrtaceae	*Syzygium glenum*			E		2/2

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plants	land plants	Myrtaceae	*Syzygium gustavioides*			C		9/9
plants	land plants	Myrtaceae	*Syzygium johnsonii*	Johnson's satinash		C		2/2
plants	land plants	Myrtaceae	*Syzygium kuranda*	Kuranda satinash		C		3/3
plants	land plants	Myrtaceae	*Syzygium luehmannii*			C		2/2
plants	land plants	Myrtaceae	*Syzygium monospermum*			C		7/7
plants	land plants	Myrtaceae	*Syzygium sayeri*			C		3/3
plants	land plants	Myrtaceae	*Syzygium sharoniae*			C		7/7
plants	land plants	Myrtaceae	*Syzygium tierneyanum*	river cherry		C		3/3
plants	land plants	Myrtaceae	*Syzygium wesa*			C		3/3
plants	land plants	Myrtaceae	*Uromyrtus metrosideros*			C		2/2
plants	land plants	Myrtaceae	*Waterhousea unipunctata*			C		4/4
plants	land plants	Myrtaceae	*Xanthostemon chrysanthus*	black penda		C		1/1
plants	land plants	Myrtaceae	*Xanthostemon formosus*			E	E	3/3
plants	land plants	Myrtaceae	*Xanthostemon whitei*			C		2/2
plants	land plants	Neckeraceae	*Neckeropsis cyclophylla*			C		3/3
plants	land plants	Nephrolepidaceae	*Nephrolepis acutifolia*			C		1/1
plants	land plants	Nephrolepidaceae	*Nephrolepis obliterata*			C		1/1
plants	land plants	Nyctaginaceae	*Pisonia umbellifera*	birdlime tree		C		3/3
plants	land plants	Nymphaeaceae	*Nymphaea nouchali*			SL		1/1
plants	land plants	Nymphaeaceae	*Nymphaea violacea*			SL		4/3
plants	land plants	Oleaceae	*Chionanthus sleumeri*			C		1/1
plants	land plants	Oleaceae	*Jasminum didymum*			C		1/1
plants	land plants	Oleaceae	*Jasminum kajewskii*			C		1/1
plants	land plants	Onagraceae	*Ludwigia hyssopifolia*		Y			4/4
plants	land plants	Onagraceae	*Ludwigia octovalvis*	willow primrose		C		1/1
plants	land plants	Ophioglossaceae	*Helminthostachys zeylanica*	flowering fern		C		1/1
plants	land plants	Ophioglossaceae	*Ophioderma pendula*			C		1/1
plants	land plants	Orchidaceae	*Anoectochilus yatesiae*	jewel orchid		NT		1/1
plants	land plants	Orchidaceae	*Apostasia wallichii*			SL		2/2
plants	land plants	Orchidaceae	*Corymborkis veratrifolia*	cinnamon orchid		SL		1/1
plants	land plants	Orchidaceae	*Demorchis queenslandica*			NT		1/1
plants	land plants	Orchidaceae	*Dendrobium canaliculatum*			SL		1/1
plants	land plants	Orchidaceae	*Dendrobium discolor*			SL		2/2
plants	land plants	Orchidaceae	*Dendrobium discolor x Dendrobium nindii*			C		1/1
plants	land plants	Orchidaceae	*Dendrobium jonesii*			SL		1/1
plants	land plants	Orchidaceae	*Dendrobium mirbelianum*	mangrove orchid		E	E	1/1
plants	land plants	Orchidaceae	*Dendrobium nindii*	blue orchid		E	E	1/1
plants	land plants	Orchidaceae	*Dipodium ensifolium*	leafy hyacinth orchid		SL		3/3
plants	land plants	Orchidaceae	*Hetaeria oblongifolia*			SL		3/3
plants	land plants	Orchidaceae	*Micropera fasciculata*			SL		1/1
plants	land plants	Orchidaceae	*Oberonia flavescens*			SL		1/1
plants	land plants	Orchidaceae	*Oberonia rimachila*			SL		1/1
plants	land plants	Orchidaceae	*Peristylus chlorandrellus*			SL		1/1
plants	land plants	Orchidaceae	*Pomatocalpa macphersonii*			SL		2/2
plants	land plants	Orchidaceae	*Robiquetia gracilistipes*			SL		1/1
plants	land plants	Orchidaceae	*Vrydagzynea grayi*			E	E	1/1

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plants	land plants	Orthotrichaceae	*Macromitrium erythrocomum*			C		1/1
plants	land plants	Orthotrichaceae	*Macromitrium funiforme*			C		1/1
plants	land plants	Pandanaceae	*Benstonea monticola*			C		2/2
plants	land plants	Pandanaceae	*Freycinetia excelsa*	climbing pandanus		C		2/2
plants	land plants	Pandanaceae	*Freycinetia marginata*			E		5/5
plants	land plants	Pandanaceae	*Freycinetia percostata*			V		3/3
plants	land plants	Pandanaceae	*Freycinetia scandens*			C		4/4
plants	land plants	Pandanaceae	*Pandanus*					1/1
plants	land plants	Passifloraceae	*Passiflora foetida*		Y			2/2
plants	land plants	Passifloraceae	*Passiflora kuranda*			C		2/2
plants	land plants	Pentaphylacaceae	*Ternstroemia cherryi*	cherry beech		C		1/1
plants	land plants	Petiveriaceae	*Rivina humilis*		Y			1/1
plants	land plants	Phyllanthaceae	*Actephila petiolaris subsp. petiolaris*			C		1/1
plants	land plants	Phyllanthaceae	*Antidesma erostre*			C		4/4
plants	land plants	Phyllanthaceae	*Bischofia javanica*			C		2/2
plants	land plants	Phyllanthaceae	*Breynia*					1/1
plants	land plants	Phyllanthaceae	*Breynia cernua*			C		4/4
plants	land plants	Phyllanthaceae	*Bridelia insulana*			C		4/4
plants	land plants	Phyllanthaceae	*Cleistanthus discolor*			C		1/1
plants	land plants	Phyllanthaceae	*Cleistanthus myrianthus*			C		9/9
plants	land plants	Phyllanthaceae	*Flueggea virosa subsp. melanthesoides*			C		1/1
plants	land plants	Phyllanthaceae	*Glochidion*					1/1
plants	land plants	Phyllanthaceae	*Glochidion harveyanum var. harveyanum*			C		1/1
plants	land plants	Phyllanthaceae	*Glochidion lobocarpum*			C		1/1
plants	land plants	Phyllanthaceae	*Glochidion philippicum*			C		1/1
plants	land plants	Phyllanthaceae	*Glochidion sessiliflorum var. pedicellatum*			C		1/1
plants	land plants	Phyllanthaceae	*Glochidion sumatranum*	umbrella cheese tree		C		6/6
plants	land plants	Phyllanthaceae	*Phyllanthus*					1/1
plants	land plants	Phyllanthaceae	*Phyllanthus brassii*			V		2/2
plants	land plants	Phyllanthaceae	*Phyllanthus clamboides*			C		2/2
plants	land plants	Picrodendraceae	*Choriceras majus*			C		8/8
plants	land plants	Picrodendraceae	*Dissiliaria tuckeri*			V		4/4
plants	land plants	Picrodendraceae	*Whyanbeelia terrae-reginae*			NT		10/10
plants	land plants	Piperaceae	*Piper caninum*	peppervine		C		3/3
plants	land plants	Piperaceae	*Piper fungiforme*			C		4/4
plants	land plants	Piperaceae	*Piper hederaceum var. hederaceum*			C		1/1
plants	land plants	Piperaceae	*Piper macropiper*			C		3/3
plants	land plants	Pittosporaceae	*Pittosporum rubiginosum*			C		5/5
plants	land plants	Pittosporaceae	*Pittosporum trilobum*			C		1/1
plants	land plants	Pittosporaceae	*Pittosporum wingii*			C		1/1
plants	land plants	Plantaginaceae	*Limnophila fragrans*			C		1/1
plants	land plants	Poaceae	*Axonopus compressus*		Y			2/2
plants	land plants	Poaceae	*Centotheca lappacea*			C		5/5
plants	land plants	Poaceae	*Centotheca philippinensis*	creek grass		C		1/1
plants	land plants	Poaceae	*Chrysopogon aciculatus*	Mackie's pest	Y			1/1
plants	land plants	Poaceae	*Coelachne pulchella*			C		3/3

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plants	land plants	Poaceae	*Cyrtococcum oxyphyllum*			C		3/3
plants	land plants	Poaceae	*Digitaria ciliaris*	summer grass	Y			1/1
plants	land plants	Poaceae	*Echinochloa colona*	awnless barnyard grass	Y			1/1
plants	land plants	Poaceae	*Eleusine indica*	crowsfoot grass	Y			2/2
plants	land plants	Poaceae	*Eragrostis interrupta*			C		1/1
plants	land plants	Poaceae	*Eragrostis tenuifolia*	elastic grass	Y			1/1
plants	land plants	Poaceae	*Eragrostis unioloides*		Y			1/1
plants	land plants	Poaceae	*Eulalia trispicata*			C		1/1
plants	land plants	Poaceae	*Garnotia stricta var. longiseta*			C		6/6
plants	land plants	Poaceae	*Hymenachne acutigluma*			C		1/1
plants	land plants	Poaceae	*Hymenachne amplexicaulis 'Olive'*		Y			3/3
plants	land plants	Poaceae	*Ichnanthus pallens var. major*			C		4/4
plants	land plants	Poaceae	*Isachne*					1/1
plants	land plants	Poaceae	*Isachne confusa*			C		2/2
plants	land plants	Poaceae	*Isachne minutula*			C		2/2
plants	land plants	Poaceae	*Isachne sharpii*			E		7/7
plants	land plants	Poaceae	*Ischaemum fragile*			C		2/2
plants	land plants	Poaceae	*Ischaemum muticum*			C		1/1
plants	land plants	Poaceae	*Ischaemum triticeum*			C		1/1
plants	land plants	Poaceae	*Lophatherum gracile*			C		2/2
plants	land plants	Poaceae	*Megathyrsus maximus var. maximus*		Y			1/1
plants	land plants	Poaceae	*Mullerochloa moreheadiana*			C		6/6
plants	land plants	Poaceae	*Oplismenus compositus*			C		1/1
plants	land plants	Poaceae	*Oplismenus imbecillis*			C		1/1
plants	land plants	Poaceae	*Oplismenus mollis*			C		2/2
plants	land plants	Poaceae	*Ottochloa nodosa*			C		3/3
plants	land plants	Poaceae	*Panicum incomtum*			C		1/1
plants	land plants	Poaceae	*Paspalum conjugatum*	sourgrass	Y			2/2
plants	land plants	Poaceae	*Pogonatherum crinitum*			C		1/1
plants	land plants	Poaceae	*Sacciolepis indica*	Indian cupscale grass		C		1/1
plants	land plants	Poaceae	*Schizachyrium fragile*	firegrass		C		1/1
plants	land plants	Poaceae	*Setaria sphacelata*		Y			1/1
plants	land plants	Poaceae	*Sporobolus fertilis*	giant Parramatta grass	Y			1/1
plants	land plants	Poaceae	*Sporobolus jacquemontii*		Y			1/1
plants	land plants	Poaceae	*Themeda quadrivalvis*	grader grass	Y			1/1
plants	land plants	Poaceae	*Urochloa decumbens*		Y			1/1
plants	land plants	Poaceae	*Whiteochloa airoides*			C		1/1
plants	land plants	Podocarpaceae	*Podocarpus grayae*			C		4/4
plants	land plants	Polygalaceae	*Polygala paniculata*		Y			2/2
plants	land plants	Polygalaceae	*Xanthophyllum fragrans*			NT		8/8
plants	land plants	Polygalaceae	*Xanthophyllum octandrum*			C		4/4
plants	land plants	Polygonaceae	*Muehlenbeckia zippelii*			C		1/1
plants	land plants	Polygonaceae	*Persicaria barbata*			C		1/1
plants	land plants	Polygonaceae	*Persicaria decipiens*	slender knotweed		C		1/1
plants	land plants	Polygonaceae	*Persicaria dichotoma*			C		1/1
plants	land plants	Polypodiaceae	*Ctenopterella gordonii*			SL		1/1

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
plants	land plants	Polypodiaceae	*Dendroconche ampla*			SL		4/4
plants	land plants	Polypodiaceae	*Microsorum membranifolium*	pimple fern		NT		2/2
plants	land plants	Polypodiaceae	*Prosaptia maidenii*			SL		1/1
plants	land plants	Polypodiaceae	*Pyrrosia longifolia*			SL		5/5
plants	land plants	Proteaceae	*Alloxylon wickhamii*			C		2/2
plants	land plants	Proteaceae	*Athertonia diversifolia*			C		2/2
plants	land plants	Proteaceae	*Austromuellera trinervia*			NT		4/4
plants	land plants	Proteaceae	*Banksia aquilonia*			C		1/1
plants	land plants	Proteaceae	*Buckinghamia ferruginiflora*			V		1/1
plants	land plants	Proteaceae	*Cardwellia sublimis*			C		2/2
plants	land plants	Proteaceae	*Carnarvonia araliifolia var. araliifolia*			C		2/2
plants	land plants	Proteaceae	*Darlingia darlingiana*			C		1/1
plants	land plants	Proteaceae	*Grevillea baileyana*			C		3/3
plants	land plants	Proteaceae	*Helicia nortoniana*			C		5/5
plants	land plants	Proteaceae	*Megahertzia amplexicaulis*			NT		3/3
plants	land plants	Proteaceae	*Musgravea heterophylla*			C		1/1
plants	land plants	Proteaceae	*Musgravea stenostachya*			C		3/3
plants	land plants	Proteaceae	*Neorites kevedianus*			C		5/5
plants	land plants	Proteaceae	*Orites fragrans*			C		7/7
plants	land plants	Proteaceae	*Placospermum coriaceum*			C		1/1
plants	land plants	Proteaceae	*Stenocarpus cryptocarpus*	giant-leaved stenocarpus		NT		2/2
plants	land plants	Proteaceae	*Stenocarpus davallioides*	fern-leaved stenocarpus		V		4/4
plants	land plants	Proteaceae	*Stenocarpus reticulatus*			C		1/1
plants	land plants	Psilotaceae	*Psilotum nudum*	skeleton fork fern		SL		2/2
plants	land plants	Pteridaceae	*Acrostichum aureum*	golden mangrove fern		SL		1/1
plants	land plants	Pteridaceae	*Acrostichum speciosum*	mangrove fern		SL		4/4
plants	land plants	Pteridaceae	*Adiantum diaphanum*			SL		2/2
plants	land plants	Pteridaceae	*Antrophyum callifolium*			SL		1/1
plants	land plants	Pteridaceae	*Pityrogramma calomelanos var. calomelanos*		Y			1/1
plants	land plants	Pteridaceae	*Taenitis pinnata*	morse fern		SL		3/3
plants	land plants	Putranjivaceae	*Drypetes iodoformis*			C		2/2
plants	land plants	Pylaisiadelphaceae	*Clastobryum cuculligerum var. dimorphum*			C		1/1
plants	land plants	Pylaisiadelphaceae	*Taxithelium lindbergii*			C		1/1
plants	land plants	Restionaceae	*Dapsilanthus elatior*			C		1/1
plants	land plants	Rhamnaceae	*Alphitonia oblata*			C		1/1
plants	land plants	Rhamnaceae	*Alphitonia petriei*	pink ash		C		1/1
plants	land plants	Rhamnaceae	*Alphitonia whitei*	red ash		C		1/1
plants	land plants	Rhamnaceae	*Emmenosperma cunninghamii*			C		2/2
plants	land plants	Rhamnaceae	*Rhamnella vitiensis*			C		1/1
plants	land plants	Rhamnaceae	*Sageretia hamosa*			C		3/3
plants	land plants	Rhamnaceae	*Schistocarpaea johnsonii*			C		3/3
plants	land plants	Rhizogoniaceae	*Pyrrhobryum medium*			C		1/1
plants	land plants	Rhizophoraceae	*Bruguiera gymnorhiza*	large-fruited orange mangrove		C		2/2
plants	land plants	Rhizophoraceae	*Bruguiera parviflora*			C		3/3
plants	land plants	Rhizophoraceae	*Carallia brachiata*	carallia		C		4/4
plants	land plants	Rhizophoraceae	*Ceriops pseudodecandra*			C		1/1

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
plants	land plants	Rhizophoraceae	*Ceriops tagal*	yellow mangrove		C		1/1
plants	land plants	Rhizophoraceae	*Rhizophora apiculata*			C		1/1
plants	land plants	Rhizophoraceae	*Rhizophora mucronata*			C		1/1
plants	land plants	Rosaceae	*Prunus turneriana*	almondbark		C		2/2
plants	land plants	Rosaceae	*Rubus alceifolius*	giant bramble	Y			3/3
plants	land plants	Rosaceae	*Rubus moluccanus var. moluccanus*			C		1/1
plants	land plants	Rubiaceae	*Aidia cowleyi*			C		1/1
plants	land plants	Rubiaceae	*Atractocarpus fitzalanii subsp. fitzalanii*			C		4/4
plants	land plants	Rubiaceae	*Atractocarpus hirtus*			C		6/6
plants	land plants	Rubiaceae	*Atractocarpus sessilis*			C		5/5
plants	land plants	Rubiaceae	*Coelospermum purpureum*			C		1/1
plants	land plants	Rubiaceae	*Coffea liberica*		Y			4/4
plants	land plants	Rubiaceae	*Cyclophyllum brevipes*			C		1/1
plants	land plants	Rubiaceae	*Cyclophyllum costatum*			V	V	5/5
plants	land plants	Rubiaceae	*Cyclophyllum multiflorum*			C		7/7
plants	land plants	Rubiaceae	*Cyclophyllum protractum*			C		2/2
plants	land plants	Rubiaceae	*Cyclophyllum rostellatum*			C		1/1
plants	land plants	Rubiaceae	*Exallage lapeyrousei*			C		4/4
plants	land plants	Rubiaceae	*Exallage radicans*			C		1/1
plants	land plants	Rubiaceae	*Geophila repens*			C		1/1
plants	land plants	Rubiaceae	*Gynochthodes jasminoides*			C		1/1
plants	land plants	Rubiaceae	*Gynochthodes sessilis*			C		1/1
plants	land plants	Rubiaceae	*Hedyotis novoguineensis*			E		4/4
plants	land plants	Rubiaceae	*Ixora baileyana*			C		1/1
plants	land plants	Rubiaceae	*Ixora biflora*			C		5/5
plants	land plants	Rubiaceae	*Ixora timorensis*			C		1/1
plants	land plants	Rubiaceae	*Lasianthus chlorocarpus*			C		7/7
plants	land plants	Rubiaceae	*Leptopetalum biflorum*			C		1/1
plants	land plants	Rubiaceae	*Mitracarpus hirtus*		Y			5/5
plants	land plants	Rubiaceae	*Morinda citrifolia*			C		1/1
plants	land plants	Rubiaceae	*Myrmecodia beccarii*			V	V	2/1
plants	land plants	Rubiaceae	*Nauclea orientalis*	Leichhardt tree		C		2/2
plants	land plants	Rubiaceae	*Neonauclea glabra*			C		2/2
plants	land plants	Rubiaceae	*Ophiorrhiza australiana subsp. australiana*			C		3/3
plants	land plants	Rubiaceae	*Psychotria coelospermum*			C		11/11
plants	land plants	Rubiaceae	*Psychotria dallachiana*			C		3/3
plants	land plants	Rubiaceae	*Psychotria loniceroides*	hairy psychotria		C		1/1
plants	land plants	Rubiaceae	*Psychotria sp. (Daintree NP P.I.Forster+ PIF21974)*			C		2/2
plants	land plants	Rubiaceae	*Psychotria sp. (Danbulla S.T.Blake 15262)*			C		1/1
plants	land plants	Rubiaceae	*Psychotria sp. (Mt Finnigan L.J.Brass 20044)*			C		1/1
plants	land plants	Rubiaceae	*Psychotria sp. (Mt Lewis V.K.Moriarty 2445)*			C		2/2
plants	land plants	Rubiaceae	*Psydrax montigena*			C		3/3
plants	land plants	Rubiaceae	*Randia audasii*			NT		5/5
plants	land plants	Rubiaceae	*Scleromitrion subulatum*			C		1/1
plants	land plants	Rubiaceae	*Scyphiphora hydrophylacea*			C		1/1
plants	land plants	Rubiaceae	*Spermacoce exilis*		Y			1/1

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
plants	land plants	Rubiaceae	*Spermacoce prostrata*		Y			9/9
plants	land plants	Rubiaceae	*Spermacoce remota*		Y			1/1
plants	land plants	Rubiaceae	*Tarenna dallachiana subsp. dallachiana*			C		3/3
plants	land plants	Rubiaceae	*Timonius singularis*			C		1/1
plants	land plants	Rubiaceae	*Timonius timon var. timon*			C		2/2
plants	land plants	Rubiaceae	*Uncaria lanosa var. appendiculata*			C		4/4
plants	land plants	Rubiaceae	*Wendlandia*					2/2
plants	land plants	Rubiaceae	*Wendlandia inclusa*			C		5/5
plants	land plants	Rubiaceae	*Wendlandia urceolata*			C		1/1
plants	land plants	Rutaceae	*Acronychia acronychioides*			C		3/3
plants	land plants	Rutaceae	*Acronychia acuminata*			NT		5/5
plants	land plants	Rutaceae	*Acronychia chooreechillum*			C		3/3
plants	land plants	Rutaceae	*Brombya platynema*			C		5/5
plants	land plants	Rutaceae	*Citrus inodora*			V		1/1
plants	land plants	Rutaceae	*Citrus x limon*		Y			1/1
plants	land plants	Rutaceae	*Flindersia bourjotiana*			C		1/1
plants	land plants	Rutaceae	*Flindersia laevicarpa var. laevicarpa*			C		1/1
plants	land plants	Rutaceae	*Flindersia pimenteliana*	maple silkwood		C		1/1
plants	land plants	Rutaceae	*Halfordia kendack*	saffron heart		C		6/6
plants	land plants	Rutaceae	*Medicosma fareana*			C		1/1
plants	land plants	Rutaceae	*Medicosma sessiliflora*			C		5/5
plants	land plants	Rutaceae	*Melicope broadbentiana*			C		1/1
plants	land plants	Rutaceae	*Melicope vitiflora*	northern evodia		C		2/2
plants	land plants	Rutaceae	*Melicope xanthoxyloides*			C		2/2
plants	land plants	Rutaceae	*Zieria madida*	Thornton Peak stink bush		CR		1/1
plants	land plants	Salicaceae	*Casearia costulata*			C		2/2
plants	land plants	Salicaceae	*Casearia dallachii*			C		2/2
plants	land plants	Salicaceae	*Casearia sp. (Mission Beach B.P.Hyland 773)*			C		1/1
plants	land plants	Salicaceae	*Flacourtia jangomas*		Y			6/6
plants	land plants	Salicaceae	*Homalium sp. (Johnstone River N.Michael 176)*			C		3/2
plants	land plants	Salicaceae	*Scolopia braunii*	flintwood		C		1/1
plants	land plants	Santalaceae	*Korthalsella brassiana*			C		1/1
plants	land plants	Santalaceae	*Notothixos leiophyllus*			C		1/1
plants	land plants	Sapindaceae	*Allophylus cobbe*			C		9/9
plants	land plants	Sapindaceae	*Arytera divaricata*	coogera		C		1/1
plants	land plants	Sapindaceae	*Arytera pauciflora*			C		3/3
plants	land plants	Sapindaceae	*Castanospora alphandii*	brown tamarind		C		3/3
plants	land plants	Sapindaceae	*Cupaniopsis diploglottoides*			C		9/9
plants	land plants	Sapindaceae	*Cupaniopsis foveolata*	narrow-leaved tuckeroo		C		3/3
plants	land plants	Sapindaceae	*Diploglottis bernieana*			C		3/3
plants	land plants	Sapindaceae	*Diploglottis smithii*	wild tamarind		C		1/1
plants	land plants	Sapindaceae	*Ganophyllum falcatum*			C		1/1
plants	land plants	Sapindaceae	*Harpullia arborea*	Cooktown tulipwood		C		5/5
plants	land plants	Sapindaceae	*Harpullia rhyticarpa*			C		4/4
plants	land plants	Sapindaceae	*Jagera madida*			C		7/7
plants	land plants	Sapindaceae	*Lepiderema sericolignis*			C		4/4

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
plants	land plants	Sapindaceae	*Mischarytera megaphylla*			C		2/2
plants	land plants	Sapindaceae	*Mischocarpus*					1/1
plants	land plants	Sapindaceae	*Mischocarpus albescens*			NT		3/3
plants	land plants	Sapindaceae	*Mischocarpus exangulatus*			C		11/11
plants	land plants	Sapindaceae	*Mischocarpus grandissimus*			C		1/1
plants	land plants	Sapindaceae	*Mischocarpus lachnocarpus*			C		3/3
plants	land plants	Sapindaceae	*Rhysotoechia flavescens*			C		1/1
plants	land plants	Sapindaceae	*Rhysotoechia mortoniana*			C		1/1
plants	land plants	Sapindaceae	*Rhysotoechia robertsonii*			C		1/1
plants	land plants	Sapindaceae	*Sapindaceae*					2/2
plants	land plants	Sapindaceae	*Sarcopteryx acuminata*			C		2/2
plants	land plants	Sapindaceae	*Sarcopteryx montana*			NT		2/2
plants	land plants	Sapindaceae	*Sarcopteryx reticulata*			C		3/3
plants	land plants	Sapindaceae	*Sarcotoechia villosa*			C		4/4
plants	land plants	Sapindaceae	*Toechima erythrocarpum*			C		2/2
plants	land plants	Sapotaceae	*Niemeyera discolor*			C		1/1
plants	land plants	Sapotaceae	*Niemeyera prunifera*			C		3/3
plants	land plants	Sapotaceae	*Palaquium galactoxylon*			C		2/2
plants	land plants	Sapotaceae	*Planchonella chartacea*			C		1/1
plants	land plants	Sapotaceae	*Planchonella euphlebia*			C		2/2
plants	land plants	Sapotaceae	*Planchonella myrsinodendron*			C		2/2
plants	land plants	Sapotaceae	*Planchonella obovata*			C		1/1
plants	land plants	Sapotaceae	*Pleioluma singuliflora*			C		1/1
plants	land plants	Sapotaceae	*Pleioluma xerocarpa*			C		2/2
plants	land plants	Sapotaceae	*Van-royena castanosperma*			C		8/8
plants	land plants	Schistochilaceae	*Schistochila cristata*			C		1/1
plants	land plants	Schizaeaceae	*Actinostachys digitata*			SL		2/2
plants	land plants	Schizaeaceae	*Schizaea dichotoma*	branched comb fern		SL		2/2
plants	land plants	Selaginellaceae	*Selaginella australiensis*			C		3/3
plants	land plants	Selaginellaceae	*Selaginella longipinna*			C		3/3
plants	land plants	Sematophyllaceae	*Acanthorrhynchium papillatum*			C		1/1
plants	land plants	Sematophyllaceae	*Clastobryophilum balansaeanum*			C		1/1
plants	land plants	Simaroubaceae	*Ailanthus integrifolia subsp. integrifolia*			C		1/1
plants	land plants	Simaroubaceae	*Samadera baileyana*			NT		1/1
plants	land plants	Smilacaceae	*Smilax aculeatissima*			C		1/1
plants	land plants	Smilacaceae	*Smilax blumei*			C		1/1
plants	land plants	Solanaceae	*Solanum magnifolium*			C		2/2
plants	land plants	Solanaceae	*Solanum torvum*	devil's fig	Y			3/3
plants	land plants	Sorapillaceae	*Sorapilla papuana*			C		3/3
plants	land plants	Sparrmanniaceae	*Triumfetta repens*			C		1/1
plants	land plants	Stemonuraceae	*Gomphandra australiana*			C		8/8
plants	land plants	Sterculiaceae	*Argyrodendron peralatum*	red tulip oak		C		2/2
plants	land plants	Sterculiaceae	*Argyrodendron sp. (Karnak P.I.Forster+ PIF10711)*			C		2/2
plants	land plants	Sterculiaceae	*Argyrodendron sp. (Whyanbeel B.P.Hyland RFK1106)*			C		7/7
plants	land plants	Sterculiaceae	*Franciscodendron laurifolium*			C		1/1
plants	land plants	Sterculiaceae	*Sterculia quadrifida*	peanut tree		C		1/1

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
plants	land plants	Sterculiaceae	*Sterculia sp. (Annan River L.J.Brass 20319)*			C		1/1
plants	land plants	Stylidiaceae	*Stylidium alsinoides*			SL		2/2
plants	land plants	Symplocaceae	*Symplocos*					6/6
plants	land plants	Symplocaceae	*Symplocos cyanocarpa var. cyanocarpa*			C		10/10
plants	land plants	Symplocaceae	*Symplocos oresbia*			NT		1/1
plants	land plants	Symplocaceae	*Symplocos paucistaminea*			C		4/4
plants	land plants	Symplocaceae	*Symplocos puberula*			C		3/3
plants	land plants	Tectariaceae	*Arthropteris palisotii*			C		2/2
plants	land plants	Tectariaceae	*Tectaria confluens*			C		2/2
plants	land plants	Theaceae	*Camellia sinensis*		Y			2/2
plants	land plants	Thelypteridaceae	*Chingia australis*			E	E	2/2
plants	land plants	Thelypteridaceae	*Christella dentata*	creek fern		SL		3/3
plants	land plants	Thelypteridaceae	*Christella parasitica*			SL		2/2
plants	land plants	Thelypteridaceae	*Christella queenslandica*			SL		2/2
plants	land plants	Thelypteridaceae	*Christella subpubescens*			SL		1/1
plants	land plants	Thelypteridaceae	*Grypothrix triphylla*			SL		4/4
plants	land plants	Thelypteridaceae	*Sphaerostephanos heterocarpos*			SL		2/2
plants	land plants	Thymelaeaceae	*Lethedon setosa*			C		2/2
plants	land plants	Urticaceae	*Pipturus argenteus*	white nettle		C		1/1
plants	land plants	Urticaceae	*Pouzolzia hirta*			C		2/2
plants	land plants	Urticaceae	*Pouzolzia zeylanica*			C		3/3
plants	land plants	Verbenaceae	*Lantana camara*	lantana	Y			1
plants	land plants	Verbenaceae	*Stachytarpheta cayennensis*		Y			4/4
plants	land plants	Violaceae	*Rinorea bengalensis forma bengalensis*			C		2/2
plants	land plants	Vitaceae	*Causonis australasica*			C		1/1
plants	land plants	Vitaceae	*Cayratia saponaria*			C		1/1
plants	land plants	Vitaceae	*Cissus repens*			C		2/2
plants	land plants	Vitaceae	*Tetrastigma nitens*	shining grape		C		4/4
plants	land plants	Winteraceae	*Bubbia queenslandiana subsp. queenslandiana*			E		1/1
plants	land plants	Winteraceae	*Bubbia whiteana*			CR		5/5
plants	land plants	Winteraceae	*Tasmannia insipida*	brush pepperbush		C		2/2
plants	land plants	Xyridaceae	*Xyris complanata*	yellow-eye		C		1/1
plants	land plants	Zamiaceae	*Bowenia spectabilis*			SL		2/2
plants	land plants	Zamiaceae	*Lepidozamia hopei*	Hope's cycad		SL		4/4
plants	land plants	Zingiberaceae	*Alpinia modesta*			C		1/1
plants	land plants	Zingiberaceae	*Etlingera australasica*			C		1/1
plants	land plants	Zingiberaceae	*Pleuranthodium racemigerum*			C		2/2

CODES

I - Y indicates that the taxon is introduced to Queensland and has naturalised.

Q - Indicates the Queensland conservation status of each taxon under the *Nature Conservation Act 1992*.
The codes are Extinct (EX), Extinct in the Wild (PE), Critically Endangered (CR), Endangered (E), Vulnerable (V), Near Threatened (NT), Special Least Concern (SL) and Least Concern (C).

A - Indicates the Australian conservation status of each taxon under the *Environment Protection and Biodiversity Conservation Act 1999*.
The values of EPBC are Extinct (EX), Extinct in the Wild (XW), Critically Endangered (CE), Endangered (E), Vulnerable (V) and Conservation Dependent (CD).

Records - The first number indicates the total number of records of the taxon (wildlife records and species listings for selected areas).
This number is output as 99999 if it equals or exceeds this value. A second number located after a / indicates the number of specimen records for the taxon.
This number is output as 999 if it equals or exceeds this value.

Appendix B EPBC Act Protected Matters report

Australian Government
Department of Climate Change, Energy, the Environment and Water

EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

Report created: 26-Jun-2024

Summary
Details
- Matters of NES
- Other Matters Protected by the EPBC Act
- Extra Information

Caveat
Acknowledgements

Summary

Matters of National Environment Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the Administrative Guidelines on Significance.

World Heritage Properties:	2
National Heritage Places:	3
Wetlands of International Importance (Ramsar	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	3
Listed Threatened Species:	70
Listed Migratory Species:	40

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at https://www.dcceew.gov.au/parks-heritage/heritage

A permit may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Lands:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	82
Whales and Other Cetaceans:	2
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None
Habitat Critical to the Survival of Marine Turtles:	None

Extra Information

This part of the report provides information that may also be relevant to the area you have

State and Territory Reserves:	10
Regional Forest Agreements:	None
Nationally Important Wetlands:	1
EPBC Act Referrals:	1
Key Ecological Features (Marine):	None
Biologically Important Areas:	None
Bioregional Assessments:	None
Geological and Bioregional Assessments:	None

Details

Matters of National Environmental Significance

World Heritage Properties [Resource Information]

Name	State	Legal Status	Buffer Status
Great Barrier Reef	QLD	Declared property	In feature area
Wet Tropics of Queensland	QLD	Declared property	In buffer area only

National Heritage Places [Resource Information]

Name	State	Legal Status	Buffer Status
Indigenous			
Wet Tropics World Heritage Area (Indigenous Values)	QLD	Within listed place	In buffer area only
Natural			
Great Barrier Reef	QLD	Listed place	In feature area
Wet Tropics of Queensland	QLD	Listed place	In buffer area only

Listed Threatened Ecological Communities [Resource Information]

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.
Status of Vulnerable, Disallowed and Ineligible are not MNES under the EPBC Act.

Community Name	Threatened Category	Presence Text	Buffer Status
Broad leaf tea-tree (Melaleuca viridiflora) woodlands in high rainfall coastal north Queensland	Endangered	Community likely to occur within area	In feature area
Littoral Rainforest and Coastal Vine Thickets of Eastern Australia	Critically Endangered	Community likely to occur within area	In buffer area only
Lowland tropical rainforest of the Wet Tropics	Endangered	Community likely to occur within area	In feature area

Listed Threatened Species [Resource Information]

Status of Conservation Dependent and Extinct are not MNES under the EPBC Act.
Number is the current name ID.

Scientific Name	Threatened Category	Presence Text	Buffer Status
BIRD			
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat known to occur within area	In feature area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area	In feature area
Casuarius casuarius johnsonii Southern Cassowary, Australian Cassowary, Double-wattled Cassowary [25986]	Endangered	Species or species habitat known to occur within area	In feature area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat known to occur within area	In feature area
Erythrotriorchis radiatus Red Goshawk [942]	Endangered	Species or species habitat likely to occur within area	In feature area
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat may occur within area	In feature area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat known to occur within area	In feature area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area	In feature area
Limnodromus semipalmatus Asian Dowitcher [843]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Limosa lapponica baueri Nunivak Bar-tailed Godwit, Western Alaskan Bar-tailed Godwit [86380]	Endangered	Species or species habitat known to occur within area	In feature area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area	In feature area
Sternula nereis nereis Australian Fairy Tern [82950]	Vulnerable	Species or species habitat known to occur within area	In buffer area only
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area	In feature area
Tyto novaehollandiae kimberli Masked Owl (northern) [26048]	Vulnerable	Species or species habitat likely to occur within area	In feature area
FISH			
Cairnsichthys bitaeniatus Daintree Rainbowfish [90721]	Critically Endangered	Species or species habitat known to occur within area	In buffer area only
Stiphodon semoni Opal Cling Goby [83909]	Critically Endangered	Species or species habitat likely to occur within area	In feature area
FROG			
Litoria dayi Australian Lace-lid, Lace-eyed Tree Frog, Day's Big-eyed Treefrog [86707]	Vulnerable	Species or species habitat likely to occur within area	In feature area
MAMMAL			
Dasyurus hallucatus Northern Quoll, Digul [Gogo-Yimidir], Wijingadda [Dambimangari], Wiminji [Martu] [331]	Endangered	Species or species habitat likely to occur within area	In feature area
Dasyurus maculatus gracilis Spotted-tailed Quoll (North Queensland), Yarri [64475]	Endangered	Species or species habitat may occur within area	In feature area
Hipposideros semoni Semon's Leaf-nosed Bat, Greater Wart-nosed Horseshoe-bat [180]	Vulnerable	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Mesembriomys gouldii rattoides			
Black-footed Tree-rat (north Queensland), Shaggy Rabbit-rat [87620]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Petauroides minor			
Greater Glider (northern), Greater Glider (north-eastern Queensland) [92008]	Vulnerable	Species or species habitat likely to occur within area	In buffer area only
Phascolarctos cinereus (combined populations of Qld, NSW and the ACT)			
Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104]	Endangered	Species or species habitat may occur within area	In feature area
Pteropus conspicillatus			
Spectacled Flying-fox [185]	Endangered	Species or species habitat known to occur within area	In feature area
Rhinolophus robertsi			
Large-eared Horseshoe Bat, Greater Large-eared Horseshoe Bat [87639]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Saccolaimus saccolaimus nudicluniatus			
Bare-rumped Sheath-tailed Bat, Bare-rumped Sheathtail Bat [66889]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Xeromys myoides			
Water Mouse, False Water Rat, Yirrkoo [66]	Vulnerable	Species or species habitat likely to occur within area	In feature area
PLANT			
Acriopsis emarginata			
Pale Chandelier Orchid [83928]	Vulnerable	Species or species habitat known to occur within area	In feature area
Actephila foetida			
[12078]	Vulnerable	Species or species habitat known to occur within area	In buffer area only
Arthraxon hispidus			
Hairy-joint Grass [9338]	Vulnerable	Species or species habitat may occur within area	In feature area
Bruguiera x hainesii			
Haines's Orange Mangrove [91351]	Critically Endangered	Species or species habitat likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Canarium acutifolium [23956]	Vulnerable	Species or species habitat likely to occur within area	In buffer area only
Carronia pedicellata [24178]	Endangered	Species or species habitat likely to occur within area	In feature area
Chingia australis [24603]	Endangered	Species or species habitat known to occur within area	In feature area
Cyclophyllum costatum a shrub [82770]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Dendrobium johannis Chocolate Tea Tree Orchid [13585]	Vulnerable	Species or species habitat likely to occur within area	In buffer area only
Dendrobium mirbelianum Dark-stemmed Antler Orchid, Mangrove Orchid [14310]	Endangered	Species or species habitat likely to occur within area	In feature area
Dendrobium nindii an orchid [11289]	Endangered	Species or species habitat known to occur within area	In feature area
Drosera prolifera [9940]	Vulnerable	Species or species habitat likely to occur within area	In buffer area only
Endiandra cooperana [52889]	Endangered	Species or species habitat may occur within area	In buffer area only
Hymenasplenium wildii listed as Asplenium wildii [92431]	Vulnerable	Species or species habitat known to occur within area	In feature area
Leichhardtia araujacea [91900]	Critically Endangered	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Mitrantia bilocularis [8269]	Critically Endangered	Species or species habitat may occur within area	In buffer area only
Myrmecodia beccarii Ant Plant [11852]	Vulnerable	Species or species habitat known to occur within area	In feature area
Phaius pictus [22564]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Phalaenopsis rosenstromii listed as Phalaenopsis amabilis subsp. rosenstromii Native Moth Orchid [15984]	Endangered	Species or species habitat likely to occur within area	In feature area
Phaleria biflora [82049]	Vulnerable	Species or species habitat likely to occur within area	In buffer area only
Phlegmariurus dalhousieanus BlueTassel-fern [86550]	Endangered	Species or species habitat likely to occur within area	In feature area
Phlegmariurus filiformis Rat's Tail Tassel-fern [86551]	Endangered	Species or species habitat may occur within area	In buffer area only
Phlegmariurus squarrosus Rock Tassel-fern, Water Tassel-fern [86556]	Critically Endangered	Species or species habitat may occur within area	In feature area
Phlegmariurus tetrastichoides Square Tassel Fern [86555]	Vulnerable	Species or species habitat may occur within area	In feature area
Polyphlebium endlicherianum Middle Filmy Fern [87494]	Endangered	Species or species habitat likely to occur within area	In buffer area only
Polyscias bellendenkerensis [7237]	Vulnerable	Species or species habitat may occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Ristantia gouldii [18776]	Vulnerable	Species or species habitat likely to occur within area	In buffer area only
Vappodes lithocola Dwarf Butterfly Orchid, Cooktown Orchid [78893]	Endangered	Species or species habitat may occur within area	In buffer area only
Vappodes phalaenopsis Cooktown Orchid [78894]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Vrydagzynea grayi Tonsil Orchid [83575]	Endangered	Species or species habitat likely to occur within area	In feature area
Zeuxine polygonoides Velvet Jewel Orchid [46794]	Vulnerable	Species or species habitat may occur within area	In buffer area only
REPTILE			
Caretta caretta Loggerhead Turtle [1763]	Endangered	Foraging, feeding or related behaviour likely to occur within area	In feature area
Chelonia mydas Green Turtle [1765]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In feature area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Foraging, feeding or related behaviour likely to occur within area	In feature area
Egernia rugosa Yakka Skink [1420]	Vulnerable	Species or species habitat may occur within area	In feature area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Species or species habitat known to occur within area	In feature area
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Breeding likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Natator depressus			
Flatback Turtle [59257]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In feature area
SHARK			
Pristis pristis			
Freshwater Sawfish, Largetooth Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Vulnerable	Species or species habitat may occur within area	In feature area
Pristis zijsron			
Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442]	Vulnerable	Species or species habitat known to occur within area	In feature area
Sphyrna lewini			
Scalloped Hammerhead [85267]	Conservation Dependent	Species or species habitat likely to occur within area	In feature area

Listed Migratory Species		[Resource Information]	
Scientific Name	Threatened Category	Presence Text	Buffer Status
Migratory Marine Birds			
Anous stolidus			
Common Noddy [825]		Species or species habitat known to occur within area	In feature area
Apus pacificus			
Fork-tailed Swift [678]		Species or species habitat likely to occur within area	In feature area
Fregata ariel			
Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat known to occur within area	In feature area
Fregata minor			
Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat likely to occur within area	In feature area
Phaethon lepturus			
White-tailed Tropicbird [1014]		Species or species habitat may occur within area	In feature area
Migratory Marine Species			
Anoxypristis cuspidata			
Narrow Sawfish, Knifetooth Sawfish [68448]		Species or species habitat likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Caretta caretta Loggerhead Turtle [1763]	Endangered	Foraging, feeding or related behaviour likely to occur within area	In feature area
Chelonia mydas Green Turtle [1765]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In feature area
Crocodylus porosus Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat likely to occur within area	In feature area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Foraging, feeding or related behaviour likely to occur within area	In feature area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Species or species habitat known to occur within area	In feature area
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Breeding likely to occur within area	In feature area
Mobula alfredi as Manta alfredi Reef Manta Ray, Coastal Manta Ray [90033]		Species or species habitat may occur within area	In feature area
Mobula birostris as Manta birostris Giant Manta Ray [90034]		Species or species habitat may occur within area	In feature area
Natator depressus Flatback Turtle [59257]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In feature area
Orcaella heinsohni Australian Snubfin Dolphin [81322]		Species or species habitat may occur within area	In feature area
Pristis pristis Freshwater Sawfish, Largetooth Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Vulnerable	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Pristis zijsron Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442]	Vulnerable	Species or species habitat known to occur within area	In feature area
Sousa sahulensis as Sousa chinensis Australian Humpback Dolphin [87942]		Foraging, feeding or related behaviour known to occur within area	In feature area
Migratory Terrestrial Species			
Cecropis daurica Red-rumped Swallow [80610]		Species or species habitat known to occur within area	In feature area
Cuculus optatus Oriental Cuckoo, Horsfield's Cuckoo [86651]		Species or species habitat known to occur within area	In feature area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area	In feature area
Hirundo rustica Barn Swallow [662]		Species or species habitat known to occur within area	In feature area
Monarcha frater Black-winged Monarch [607]		Species or species habitat may occur within area	In feature area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat known to occur within area	In feature area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area	In feature area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat known to occur within area	In feature area
Symposiachrus trivirgatus as Monarcha trivirgatus Spectacled Monarch [83946]		Species or species habitat known to occur within area	In feature area
Migratory Wetlands Species			

Scientific Name	Threatened Category	Presence Text	Buffer Status
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat known to occur within area	In feature area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat known to occur within area	In feature area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat known to occur within area	In feature area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area	In feature area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area	In feature area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat known to occur within area	In feature area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat known to occur within area	In feature area
Limnodromus semipalmatus Asian Dowitcher [843]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat known to occur within area	In feature area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area	In feature area
Pandion haliaetus Osprey [952]		Breeding known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area	In feature area

Other Matters Protected by the EPBC Act

Listed Marine Species			[Resource Information]
Scientific Name	Threatened Category	Presence Text	Buffer Status
Bird			
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat known to occur within area	In feature area
Anous stolidus Common Noddy [825]		Species or species habitat known to occur within area	In feature area
Anseranas semipalmata Magpie Goose [978]		Species or species habitat may occur within area overfly marine area	In feature area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area	In feature area
Bubulcus ibis as Ardea ibis Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area	In feature area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat known to occur within area	In feature area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat known to occur within area overfly marine area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area overfly marine area	In feature area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area overfly marine area	In feature area
Cecropis daurica as Hirundo daurica Red-rumped Swallow [80610]		Species or species habitat known to occur within area overfly marine area	In feature area
Chalcites osculans as Chrysococcyx osculans Black-eared Cuckoo [83425]		Species or species habitat may occur within area overfly marine area	In feature area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat known to occur within area	In feature area
Fregata ariel Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat known to occur within area	In feature area
Fregata minor Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat likely to occur within area	In feature area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat known to occur within area overfly marine area	In feature area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area	In feature area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area overfly marine area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Hirundo rustica Barn Swallow [662]		Species or species habitat known to occur within area overfly marine area	In feature area
Limnodromus semipalmatus Asian Dowitcher [843]	Vulnerable	Species or species habitat may occur within area overfly marine area	In buffer area only
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat known to occur within area	In feature area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area	In feature area
Monarcha frater Black-winged Monarch [607]		Species or species habitat may occur within area overfly marine area	In feature area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat known to occur within area overfly marine area	In feature area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area overfly marine area	In feature area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area	In feature area
Pandion haliaetus Osprey [952]		Breeding known to occur within area	In feature area
Phaethon lepturus White-tailed Tropicbird [1014]		Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat known to occur within area overfly marine area	In feature area
Rostratula australis as Rostratula benghalensis (sensu lato) Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area overfly marine area	In feature area
Symposiachrus trivirgatus as Monarcha trivirgatus Spectacled Monarch [83946]		Species or species habitat known to occur within area overfly marine area	In feature area
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area overfly marine area	In feature area
Fish			
Acentronura tentaculata Shortpouch Pygmy Pipehorse [66187]		Species or species habitat may occur within area	In feature area
Bulbonaricus davaoensis Davao Pughead Pipefish [66190]		Species or species habitat may occur within area	In feature area
Choeroichthys brachysoma Pacific Short-bodied Pipefish, Short-bodied Pipefish [66194]		Species or species habitat may occur within area	In feature area
Choeroichthys sculptus Sculptured Pipefish [66197]		Species or species habitat may occur within area	In feature area
Choeroichthys suillus Pig-snouted Pipefish [66198]		Species or species habitat may occur within area	In feature area
Corythoichthys amplexus Fijian Banded Pipefish, Brown-banded Pipefish [66199]		Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Corythoichthys flavofasciatus Reticulate Pipefish, Yellow-banded Pipefish, Network Pipefish [66200]		Species or species habitat may occur within area	In feature area
Corythoichthys intestinalis Australian Messmate Pipefish, Banded Pipefish [66202]		Species or species habitat may occur within area	In feature area
Corythoichthys ocellatus Orange-spotted Pipefish, Ocellated Pipefish [66203]		Species or species habitat may occur within area	In feature area
Corythoichthys paxtoni Paxton's Pipefish [66204]		Species or species habitat may occur within area	In feature area
Corythoichthys schultzi Schultz's Pipefish [66205]		Species or species habitat may occur within area	In feature area
Cosmocampus maxweberi Maxweber's Pipefish [66209]		Species or species habitat may occur within area	In feature area
Doryrhamphus dactyliophorus Banded Pipefish, Ringed Pipefish [66210]		Species or species habitat may occur within area	In feature area
Doryrhamphus excisus Bluestripe Pipefish, Indian Blue-stripe Pipefish, Pacific Blue-stripe Pipefish [66211]		Species or species habitat may occur within area	In feature area
Doryrhamphus janssi Cleaner Pipefish, Janss' Pipefish [66212]		Species or species habitat may occur within area	In feature area
Festucalex cinctus Girdled Pipefish [66214]		Species or species habitat may occur within area	In feature area
Festucalex gibbsi Gibbs' Pipefish [66215]		Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Halicampus dunckeri Red-hair Pipefish, Duncker's Pipefish [66220]		Species or species habitat may occur within area	In feature area
Halicampus grayi Mud Pipefish, Gray's Pipefish [66221]		Species or species habitat may occur within area	In feature area
Halicampus macrorhynchus Whiskered Pipefish, Ornate Pipefish [66222]		Species or species habitat may occur within area	In feature area
Halicampus mataafae Samoan Pipefish [66223]		Species or species habitat may occur within area	In feature area
Halicampus nitidus Glittering Pipefish [66224]		Species or species habitat may occur within area	In feature area
Halicampus spinirostris Spiny-snout Pipefish [66225]		Species or species habitat may occur within area	In feature area
Hippichthys cyanospilos Blue-speckled Pipefish, Blue-spotted Pipefish [66228]		Species or species habitat may occur within area	In feature area
Hippichthys heptagonus Madura Pipefish, Reticulated Freshwater Pipefish [66229]		Species or species habitat may occur within area	In feature area
Hippichthys penicillus Beady Pipefish, Steep-nosed Pipefish [66231]		Species or species habitat may occur within area	In feature area
Hippichthys spicifer Belly-barred Pipefish, Banded Freshwater Pipefish [66232]		Species or species habitat may occur within area	In feature area
Hippocampus bargibanti Pygmy Seahorse [66721]		Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Hippocampus histrix Spiny Seahorse, Thorny Seahorse [66236]		Species or species habitat may occur within area	In feature area
Hippocampus kuda Spotted Seahorse, Yellow Seahorse [66237]		Species or species habitat may occur within area	In feature area
Hippocampus planifrons Flat-face Seahorse [66238]		Species or species habitat may occur within area	In feature area
Hippocampus zebra Zebra Seahorse [66241]		Species or species habitat may occur within area	In feature area
Micrognathus andersonii Anderson's Pipefish, Shortnose Pipefish [66253]		Species or species habitat may occur within area	In feature area
Micrognathus brevirostris thorntail Pipefish, Thorn-tailed Pipefish [66254]		Species or species habitat may occur within area	In feature area
Microphis brachyurus Short-tail Pipefish, Short-tailed River Pipefish [66257]		Species or species habitat may occur within area	In feature area
Nannocampus pictus Painted Pipefish, Reef Pipefish [66263]		Species or species habitat may occur within area	In feature area
Phoxocampus diacanthus Pale-blotched Pipefish, Spined Pipefish [66266]		Species or species habitat may occur within area	In feature area
Siokunichthys breviceps Softcoral Pipefish, Soft-coral Pipefish [66270]		Species or species habitat may occur within area	In feature area
Solegnathus hardwickii Pallid Pipehorse, Hardwick's Pipehorse [66272]		Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Solenostomus cyanopterus Robust Ghostpipefish, Blue-finned Ghost Pipefish, [66183]		Species or species habitat may occur within area	In feature area
Solenostomus paradoxus Ornate Ghostpipefish, Harlequin Ghost Pipefish, Ornate Ghost Pipefish [66184]		Species or species habitat may occur within area	In feature area
Syngnathoides biaculeatus Double-end Pipehorse, Double-ended Pipehorse, Alligator Pipefish [66279]		Species or species habitat may occur within area	In feature area
Trachyrhamphus bicoarctatus Bentstick Pipefish, Bend Stick Pipefish, Short-tailed Pipefish [66280]		Species or species habitat may occur within area	In feature area
Trachyrhamphus longirostris Straightstick Pipefish, Long-nosed Pipefish, Straight Stick Pipefish [66281]		Species or species habitat may occur within area	In feature area
Reptile			
Caretta caretta Loggerhead Turtle [1763]	Endangered	Foraging, feeding or related behaviour likely to occur within area	In feature area
Chelonia mydas Green Turtle [1765]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In feature area
Crocodylus porosus Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat likely to occur within area	In feature area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Foraging, feeding or related behaviour likely to occur within area	In feature area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Species or species habitat known to occur within area	In feature area
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Breeding likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Natator depressus			
Flatback Turtle [59257]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In feature area

Whales and Other Cetaceans			[Resource Information]
Current Scientific Name	Status	Type of Presence	Buffer Status
Mammal			
Orcaella heinsohni			
Australian Snubfin Dolphin [81322]		Species or species habitat may occur within area	In feature area
Sousa sahulensis			
Australian Humpback Dolphin [87942]		Foraging, feeding or related behaviour known to occur within area	In feature area

Extra Information

State and Territory Reserves			[Resource Information]
Protected Area Name	Reserve Type	State	Buffer Status
Acaciavale	Nature Refuge	QLD	In buffer area only
Daintree	National Park	QLD	In buffer area only
Daintree	National Park Aboriginal	QLD	In feature area
Eastern Kuku Yalanji	Indigenous Protected Area	QLD	In feature area
Great Barrier Reef Coast	Marine Park	QLD	In feature area
Kaba-Kada	Nature Refuge	QLD	In buffer area only
Lot 83	Nature Reserve	QLD	In buffer area only
Milky Pine	Nature Refuge	QLD	In buffer area only
Rainforest Rescue	Nature Refuge	QLD	In buffer area only
The Swamp Forest	Nature Refuge	QLD	In buffer area only

Nationally Important Wetlands		[Resource Information]
Wetland Name	State	Buffer Status
Lower Daintree River	QLD	In feature area

EPBC Act Referrals				[Resource Information]
Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
Daintree Microgrid Project	2022/09341		Completed	In buffer area only

Caveat

1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data are available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance

3 DATA SOURCES

Threatened ecological communities

For threatened ecological communities where the distribution is well known, maps are generated based on information contained in recovery plans, State vegetation maps and remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species

Threatened, migratory and marine species distributions have been discerned through a variety of methods. Where distributions are well known and if time permits, distributions are inferred from either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc.) together with point locations and described habitat; or modelled (MAXENT or BIOCLIM habitat modelling) using

Where little information is available for a species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc.).

In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More detailed distribution mapping methods are used to update these distributions

4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

The following groups have been mapped, but may not cover the complete distribution of the species:

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded
- seals which have only been mapped for breeding sites near the Australian continent

The breeding sites may be important for the protection of the Commonwealth Marine environment.

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

-Office of Environment and Heritage, New South Wales
-Department of Environment and Primary Industries, Victoria
-Department of Primary Industries, Parks, Water and Environment, Tasmania
-Department of Environment, Water and Natural Resources, South Australia
-Department of Land and Resource Management, Northern Territory
-Department of Environmental and Heritage Protection, Queensland
-Department of Parks and Wildlife, Western Australia
-Environment and Planning Directorate, ACT
-Birdlife Australia
-Australian Bird and Bat Banding Scheme
-Australian National Wildlife Collection
-Natural history museums of Australia
-Museum Victoria
-Australian Museum
-South Australian Museum
-Queensland Museum
-Online Zoological Collections of Australian Museums
-Queensland Herbarium
-National Herbarium of NSW
-Royal Botanic Gardens and National Herbarium of Victoria
-Tasmanian Herbarium
-State Herbarium of South Australia
-Northern Territory Herbarium
-Western Australian Herbarium
-Australian National Herbarium, Canberra
-University of New England
-Ocean Biogeographic Information System
-Australian Government, Department of Defence
Forestry Corporation, NSW
-Geoscience Australia
-CSIRO
-Australian Tropical Herbarium, Cairns
-eBird Australia
-Australian Government – Australian Antarctic Data Centre
-Museum and Art Gallery of the Northern Territory
-Australian Government National Environmental Science Program
-Australian Institute of Marine Science
-Reef Life Survey Australia
-American Museum of Natural History
-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania
-Tasmanian Museum and Art Gallery, Hobart, Tasmania
-Other groups and individuals

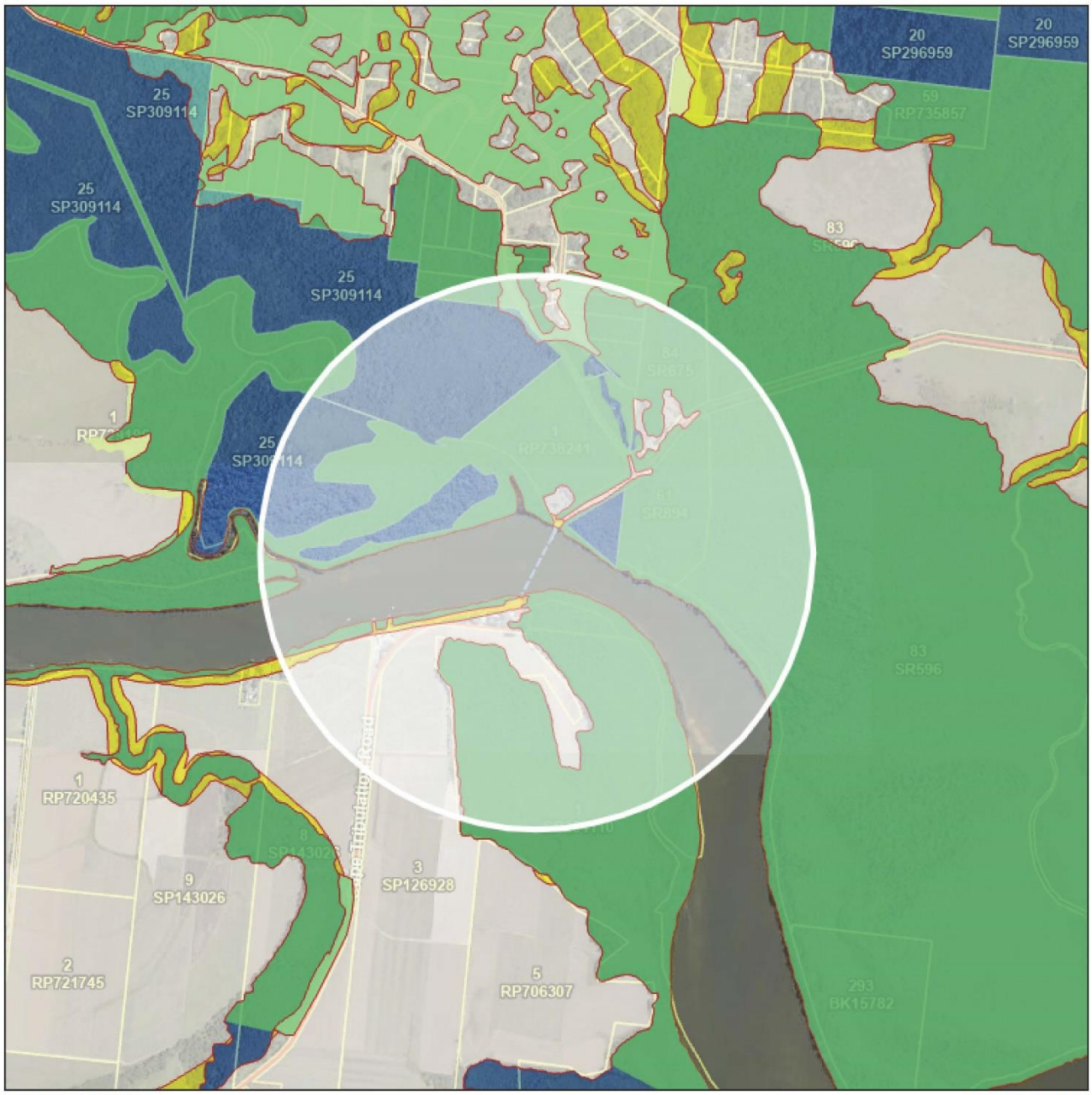
The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Appendix C Regulated vegetation mapping

Regulated Vegetation Mapping

Daintree Ferry - PPS 2024

16°14'32"S 145°22'50"E 16°14'32"S 145°24'58"E



16°16'35"S 145°22'50"E 16°16'35"S 145°24'58"E

A product of Queensland Globe



– Category B remnant vegetation

– Category C high-value regrowth

– Category R high-value reef regrowth

– Category X

– Flora trigger area

N

0 500 metres

Scale: 1:20000

Printed at: A4

Print date: 26/6/2024

Not suitable for accurate measurement.

Projection: Web Mercator EPSG 102100 (3857)

For more information, visit https://qldglobe.information.qld.gov.au/help-info/Contact-us.html

Queensland Government
Department of Resources

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Appendix D Matters of State Environmental Significance report

Common Name	Scientific Name	Status EPBC Act	Status NC Act	Preferred Habitat	Likelihood of Occurrence Within Project site
Plants					
pale chandelier orchid	*Acriopsis emarginata*	V	V	An epiphytic orchid that occurs within the humid lowlands of the Wet Tropics bioregion within rainforests margins and swamps (Jones *et al.*, 2021).	**Confirmed** A single individual was recorded within RE 7.1.1 on a *Bruguiera* sp. trunk. This species may occur within the adjacent similar mangrove habitats.
	Acronychia acuminata		NT	A large rutaceous shrub that occurs at elevations above 300m between the Daintree River and Bloomfield River (AVH, 2020).	**Low** Suitable habitat does not occur within the project site. No proximate records occur.
	Actephila foetida	V	V	Endemic to NEQ, restricted to the areas around Harvey Creek and the township of Bellenden Ker, and Hutchinson Creek, Cow Bay. Altitudinal range from near sea level to 100 m. Grows as an understory plant in +/- undisturbed lowland rain forest.	**Moderate** Suitable habitat does occur within the project site. Nearest record is recorded in lowland rainforest 4km to the north.

Common Name	Scientific Name	Status EPBC Act	Status NC Act	Preferred Habitat	Likelihood of Occurrence Within Project site
jewel orchid	*Anoectochilus yatesiae*		NT	Terrestrial herb with aboveground creeping rhizomes that are succulent and cylindrical 2-4 mm in width. 2-6 leaves per stem are dark green or coppery with silvery venation (Jones, 2010). Grows on mossy rocks along small streams in shaded and humid areas. Restricted to high elevation mountain areas above 500m.	**Low** The project site is outside the known elevational range for this species.
	Argophyllum cryptophlebum		V	Endemic to NEQ, occurring in the Cape Tribulation area, the Bellenden Ker - Bartle Frere massif, and on Bell Peak. Altitudinal range from 600-1500 m. Grows on granite, usually in stunted vegetation on the tops and upper slopes of mountains.	**Low** Nearest record is located 11 km to the north of the project site on Thorntons Peak. Lack of granite landforms on the project site and low elevation exclude this species from potentially occurring.
	Archidendron kainsii		V	Endemic to NEQ, known only from collections made in the Daintree-Cape Tribulation area. Altitudinal range from near sea level to 200 m. Grows as an understory plant in lowland rain forest.	**Low** Nearest record is located 11 km to the north of the project site west of Thorntons Beach.

Common Name	Scientific Name	Status EPBC Act	Status NC Act	Preferred Habitat	Likelihood of Occurrence Within Project site
hairy-joint grass	*Arthraxon hispidus*	V	V	This species is found in and on the edges of rainforest and in wet sclerophyll forest, often near creeks or swamps. Within Australia, it has not been recorded north of Rolleston (it has also been recorded from Timor and Papua New Guinea) (DEE, 2018).	**Low** Suitable habitat is present within the project site, but this species has not been recorded north of Rolleston.
	Austromuellera trinervia		NT	Daintree River and the Butchers Creek-Boonjee area on the western side of Mt Bartle Frere. Altitudinal range from sea level to 800 m. Grows in well-developed lowland and upland rain forest.	**Moderate** Suitable habitat may be present on site. This species is known to occur on a variety of soils in the locality. The nearest record is located approx. 2km to the north.
	Beilschmiedia castrisinensis		NT	*Beilschmiedia castrisinensis*, is a rainforest tree/ shrub in the laurel family. It is restricted to an area between the Bloomfield and Daintree River, where it grows in well-developed upland rainforest.	**Low** Nearest proximate records >5km to the east near Alexandra Creek with it grows within *Acacia celsa* forest on granite. Project site does not contain the preferred habitat for this tree.

Common Name	Scientific Name	Status EPBC Act	Status NC Act	Preferred Habitat	Likelihood of Occurrence Within Project site
	Bubbia queenslandica subsp. queenslandica		NT	Endemic to NEQ. Altitudinal range from 700-1250 m. Grows as an understory tree in well-developed mountain rain forest, usually on granite.	**Low** Nearest record is located 11 km to the north of the project site on Thorntons Peak. Lack of granite landforms on the project site and low elevation exclude this species from potentially occurring.
	Bubbia whiteana		V	Endemic to NEQ, known only from the Thornton Peak and Mt Pieter Botte areas. Altitudinal range from 800-1500 m. Grows as an understory plant in mountain rain forest.	**Low** Nearest record is located 11 km to the north of the project site on Thorntons Peak. Lack of granite landforms on the project site and low elevation exclude this species from potentially occurring.
	Buchanania mangoides		V	A small tree growing to a DBH no greater than 30cm. Endemic to NEQ, known only from collections made on Snapper, High Bedarra and North Brook Islands. Altitudinal range near sea level. Grows on calcium rich substrates in beach forest (Zich *et al.*, 2021).	**Low** Lack of suitable habitat within the project site.

Common Name	Scientific Name	Status EPBC Act	Status NC Act	Preferred Habitat	Likelihood of Occurrence Within Project site
	Buckinghamia ferruginiflora		V	A Proteaceae tree growing in an area between the Bloomfield and Daintree River. Grows in well-developed upland and lowland rainforest (Zich, 2020a)	**Low** Nearest proximate records >2km to the east near Alexandra Creek with it grows within *Acacia celsa* forest on granite. Project site does not contain the preferred habitat for this tree.
Haines's orange mangrove	*Bruguiera x hainesii*	CE	CE	The Haines's Orange mangrove is an evergreen mangrove tree that grows to 18m tall. One population is known in the Cairns region and occurs adjacent to the Trinity Inlet (AVH, 2022).	**Low** Although suitable habitat is present for this species, the project site is outside the known distribution for this species. The nearest specimen collection is 20 km south near to the town of Mossman.
	Canarium acutifolium	V	V	In Australia, *C. acutifolium var. acutifolium* grows naturally below ca. 100 m (330 ft) altitude in the scarce remaining lowland rainforests of the Wet Tropics region of north-eastern Queensland.	**Low** Although suitable habitat is present for this species, the project site is outside the known distribution for this species. The nearest specimen collection is 20 km south near to the town of Mossman.

Common Name	Scientific Name	Status EPBC Act	Status NC Act	Preferred Habitat	Likelihood of Occurrence Within Project site
	Ceratopetalum corymbosum		V	Endemic to NEQ, restricted to the Thornton Peak area north of the Daintree River. Altitudinal range from 1200-1300 m. Grows in stunted mountain rain forest. This species has distinct spathulate stipules 5-10 mm in length (Zich *et al.*, 2022).	**Low** Lack of suitable habitat within the project site.
	Cheilocostus potierae		E	Endemic to Queensland, occurs in CYP and NEQ with collections from some of the Torres Strait Islands and the Tully and Daintree areas. Altitudinal range very small, being found only slightly above sea level. Usually grows in disturbed areas of lowland rain forest.	**Moderate** Suitable habitat is present within the project site. The nearest record for this species is located 5 km to the west along a tributary of the Daintree River where it occurs within complex mesophyll vine forest bordering mangroves.
	Citrus inodora		V	Endemic to NEQ, known only from the eastern foothills of the Bellenden Ker Range - Mt Bartle Frere area and also from the Cape Tribulation area. Altitudinal range from near sea level to 120 m. Grows as an understory plant in undisturbed well developed lowland rain forest.	**Moderate** Suitable habitat is present within the project site. The nearest record for this species is located 5 km to the south along the Daintree River.
	Ceratopetalum macrophyllum		NT	A rainforest plant restricted to Noah Creek, Roaring Meg creek catchments and Alexandra Creek. Grows in well-developed rainforest often along creeks and gullies (Zich, 2020a).	**Moderate** Proximate records occur in sclerophyll forest within 2km to the east of the project site.

Common Name	Scientific Name	Status EPBC Act	Status NC Act	Preferred Habitat	Likelihood of Occurrence Within Project site
	Chingia australis	E	E	This species is known from Wooroonooran National Park, and an area near the Daintree National Park. It is a fern found in mesophyll and upland notophyll vine forest on clay soil derived from a range of geologies. It is a specialist of small to medium sized gaps in the rainforest arising from disturbance. It is particularly dependant on the maintenance of a humid local microclimate (DAWE, 2021).	**Low:** Suitable habitat is not present within the project site. No proximate records.
	Cyclophyllum costatum	V	V	A large shrub that occurs within well-developed rainforest (AVH, 2020).	**Low** Suitable high elevation rainforest habitat does not occur within the project site. No proximate records.
	Demorchis queenslandica	V	V	Leafless terrestrial orchid with a terminal raceme up to 8 cm in length. Occurs in lowland rainforest growing in small groups on the forest floor. This orchid is rarely seen as it is only present above ground for 1-2 weeks and the elongated capsules are more readily observed than the small flowers. Flowers between November and January (Jones, 2010).	**Low** Suitable habitat is not present within the project site. No proximate records.
chocolate tea-tree orchid	*Dendrobium johannis*	V	V	Occurs in open humid habitats, close to swamps, in pockets of monsoon forest, and on slopes in open woodlands. (AVH, 2020).	**Moderate** Suitable habitat may occur within the project site.

Common Name	Scientific Name	Status EPBC Act	Status NC Act	Preferred Habitat	Likelihood of Occurrence Within Project site
dark-stemmed antler orchid	*Dendrobium mirbelianum*	E	E	An epiphytic orchid of mangroves and coastal swamps between the Daintree and Innisfail (AVH, 2020).	**Moderate** Suitable habitat may occur within the project site. No proximate records.
blue antler orchid	*Dendrobium nindii*	E	E	An epiphytic orchid of mangroves and coastal swamps between the Daintree and Innisfail (AVH 2020).	**Confirmed** A total of 23 plants confirmed on the bark of mangroves and paperbarks in RE 7.1.4a. No proximate records.
	Dioclea hexandra		V	Occurs in NEQ. Altitudinal range quite small, from near sea level to 50 m. Grows in lowland rain forest or swamp forest. May also occur in New Guinea.	**Moderate** Suitable habitat may occur within the project site. Nearest record located 93pprox.. 2km to the east.
	Dissiliaria tuckeri		V	A large tree that occurs on alluvia from sea level to 760m asl within well-developed rainforest. Grows along watercourses in well-developed rain forest on rocky alluvia derived from granite. (Zich *et al.*, 2020).	**Moderate** Suitable habitat may occur within the project site. Numerous records are located near the Daintree township aprox. 8 km to the west of the project site.

Common Name	Scientific Name	Status EPBC Act	Status NC Act	Preferred Habitat	Likelihood of Occurrence Within Project site
	Drosera prolifera	V	V	This small carnivorous herb is only known from the Daintree region, where it grows moist rocks and mossy ledges in rainforest environments. Altitudinal range from 400-1200m.	**Low** The project site does not contain suitable habitats.
	Endiandra cooperana	E	E	Endemic to NEQ, restricted to the area between Cape Tribulation and the Daintree River. Altitudinal range probably very small, from near sea level to 10 m. Grows in well-developed lowland rain forest.	**Moderate** Suitable habitat may occur within the project site. Nearest recorded located 2 km to the south east.
	Endiandra grayi		V	Endemic to NEQ, restricted to the area between the Daintree River and Cape Tribulation. Altitudinal range from sea level to 40 m. Grows in well-developed lowland rain forest.	**Moderate** Suitable habitat may occur within the project site. Located approximately 2 km to the south east.
	Endiandra micronuera		NT	Endemic to NEQ, restricted to the Daintree River and Cape Tribulation area. Altitudinal range from sea level to 250 m. Grows in well-developed lowland rain forest, usually on soils derived from metamorphic rocks.	**Moderate** Suitable habitat may occur within the project site. Located approximately 2 km to the south east.

Common Name	Scientific Name	Status EPBC Act	Status NC Act	Preferred Habitat	Likelihood of Occurrence Within Project site
	Freycinetia marginata		V	Occurs in CYP and NEQ. Altitudinal range from near sea level to 200 m. Grows in lowland rain forest frequently along creeks and gullies. Also occurs in New Guinea.	**Moderate** Suitable habitat may occur within the project site. Numerous records along the Daintree River within 2 km of the project site.
	Freycinetia percocosta		V	Occurs in NT, CYP and NEQ. Altitudinal range from near sea level to 450 m. Grows in well-developed lowland and upland rain forest. Also occurs in New Guinea and the Solomon Islands.	**Moderate** Suitable habitat may occur within the project site. Nearest record located approx. 6 km to the north at Diwan.
	Gardenia actinocarpa			Endemic to NEQ, known only from the Noah Creek area. Altitudinal range quite small, close to sea level. Grows as an understory plant in undisturbed lowland rain forest.	**Low** This species has a very limited distribution within the Noah Creek catchment.
	Gymnostoma australianum		V	This casuarina tree species grows within the Thornton peak region, from sea level to 1350m asl. Whilst this tree occurs within rainforest environments, it typically grows where full rainforest development is limited, such as more exposed mountain tops and along water courses (Zich, 2020a).	**Low** Suitable habitat is not present on the project site. Nearest record is located 10km to the north of the project site.

Common Name	Scientific Name	Status EPBC Act	Status NC Act	Preferred Habitat	Likelihood of Occurrence Within Project site
	Hedyotis novoguineensis		E	A small (~50cm) weakly erect herb with an altitudinal range from near sea level to 660 m. Grows in rainforest, sclerophyll forest, Allocasuarina-Meleleuca woodland, Melaleuca swamp and in grassland. Distinct from other Rubiaceae herbs that occur within the area by distinctly squared stems and relatively rounded and fleshy leaves (Zich *et al.*, 2021).	**Moderate** Numerous records are located in close proximity to the project site. Suitable habitat is present within the project site.
yellow siris	*Heliodendron xanthoxylon*		NT	A large leguminous tree that grows in well - developed rainforest within the Wet Tropics bio-region (AVH, 2022). Known to occur in clayey soils that are poorly drained.	**Moderate** Suitable habitat and proximate records are present for this species.
	Hymenasplenium wildii	V	V	Considered endemic to NE QLD, where it is known from a small area near Daintree but also historically recorded from the Cairns region. Terrestrial on steep mudbanks or lithophytic on rocks in streambeds in lowland high rainfall humid vine forest.	**Moderate** Suitable habitat and proximate records are present for this species.
	Isachne sharpii		E	A low creeping grass. Known only from a small area near Cape Tribulation in NEQ. Altitudinal range near sea level. Grows in Licuala swamp forest and rainforest in damp soil or in shallow water.	**Moderate** Suitable habitat and proximate records are present for this species. Nearest record is located 700m to the north east of the project site.

Common Name	Scientific Name	Status EPBC Act	Status NC Act	Preferred Habitat	Likelihood of Occurrence Within Project site
	Kayea larnachiana		V	Medium sized tree with large opposite leaves with a short swollen and scaley petiole. Newly emerging leaves are bright red. Endemic to NEQ, restricted to a small area between Cape Tribulation and Mossman. Altitudinal range from sea level to about 100 m. Grows in well-developed lowland rain forest.	Numerous records clustered directly west of Thornton Beach
	Lindsaea terrae-reginae		E	Endemic to the Thornton Range and Main Coast Range, NE QLD. Terrestrial or in cracks at the base of large boulders in mesic upper montane vine forest.	**Moderate** Nearest record at the town of Diwan 10km to the north of the project site.
	Linospadix palmerianus		NT	Endemic to NEQ, known only from Mt Bartle Frere, the Bellenden Ker Range and the surrounding foothills. Altitudinal range from 300-1600 m. Grows as an understory plant in upland and mountain rain forests. Distinguished from other Linospadix species by the combination of the clustering habit, elongate-cylindrical fruit, regularly segmented pinnate leaf and long petiole.	**Low** The project site is outside the known elevational range for this species. No records for this species occur north of the township of Mossman.

Common Name	Scientific Name	Status EPBC Act	Status NC Act	Preferred Habitat	Likelihood of Occurrence Within Project site
	Megahertzia amplexicaulis		NT	This rainforest tree/ shrub of the Proteaceae family occurs in the Daintree rainforest region. It is known only from Noah Creek, Mt Sorrow, Mt Hemmant, Pieter Botte Logging Area and Roaring Meg Creek (Zich, 2020a).	**Moderate** Proximate records exist in the rainforest environments near the site, approximately 3km away. May occur in rainforest sections of works area.
ant-plant	*Myrmecodia beccarii*	V	V	The ant plant occurs in coastal woodland and mangrove between Cooktown and Ingham in Queensland. It is a unique epiphyte (a plant that lives harmlessly on another plant) that has a special association with the golden ant which lives in the chambers of the tuber, and the apollo jewel butterfly which lays its eggs on the plant. The golden ants carry the butterfly eggs into the chambers where they develop into butterflies.	**Confirmed** Present within mangrove forest communities on the northern banks of the Daintree River. Large numbers recorded within RE 7.1.4a and RE 7.1.1.
	Mischocarpus albescens		NT	Small tree restricted to lowland and upland well developed rainforest between the Daintree River and China Camp (AVH, 2022).	**Moderate** Suitable habitat for this species is present within the project site. Numerous records are present 1.5 km to the north of the project site.

Common Name	Scientific Name	Status EPBC Act	Status NC Act	Preferred Habitat	Likelihood of Occurrence Within Project site
	Mitrantia bilocularis		E	Endemic to NEQ, known only from Timber Reserve 55, Whyanbeel. Altitudinal range from 100-250 m. Grows in well-developed lowland rain forest or on the boundary between rain forest and wet sclerophyll forest.	**Low** Lack of suitable habitat is present. The project site is outside the known elevational range for this species.
	Neostrearia fleckeri		NT	Endemic to NEQ, restricted to the area between the Daintree River and Innisfail. Altitudinal range from near sea level to 650 m. Grows in well-developed lowland and foothill rain forest.	**Moderate** Marginal potential habitat is present within the project site. Nearest record is located >10 km to the south of the Daintree River.
	Paramapania parvibractea		V	Tufted perennial herb to 50cm with a large inflorescence 30 cm in length (AVH, 2022)	**Low** **All regional records are located in upland rainforest.**
forest swamp orchid	*Phaius pictus*	V	V	*Phaius pictus* occurs in north-east Queensland, sporadically from the McIlwraith Range, Bloomfield River to Kirrama Range. It is highly localised, restricted to rainforests from 0–600 m altitude, and usually occurs in sheltered humid sites close to streams and seepage among forest litter on boulders (Jones 2006).	**Low** May occur within swampy sections of the project site. No proximate records.
native moth orchid	*Phalaenopsis amabilis subsp. rosenstromii*	E	E	Occurs within well-developed rainforest as an epiphyte within humid sections with high air movement (Jones *et al.*, 2020).	**Low** Suitable habitat for this species is unlikely to occur within the project site.

Common Name	Scientific Name	Status EPBC Act	Status NC Act	Preferred Habitat	Likelihood of Occurrence Within Project site
	Phaleria biflora	V	V	Large shrub or understorey tree restricted to >1000m elevation on Thorntons peak and Mt Spurgeon (Jones et al., 2020).	**Low** Suitable habitat for this species does not occur within the project site.
blue tassel-fern	*Phlegmariurus dalhousieanus*	E	CR	*Phlegmariurus dalhousieana* grows on trees in the upper canopy of swampy forests and on rocks in rainforests. It grows in habitat along freshwater creeks (DES, 2022).	**Low** Suitable habitat for this species is unlikely to occur within the project site.
layered tassel-fern	*Phlegmariurus phlegmarioides*		V	Rainforest epiphytic fern occurring at low elevations between Iron Range and Hinchinbrook Island. Can be distinguished from other Australian Phlegmariurus by the heterophyllous shoots and lycophylls spreading in four planes (Field *et al.*, 2022).	
rock-tassel-fern	*Phlegmariurus squarrosus*	CE	CE	A lithophyte or epiphyte of rainforest occurring along watercourses between Tully and the Daintree (Field *et al.*, 2022).	
	Phyllanthus brassii		V	Occurs to Thornton Peak ad Whyanbeel north of Mossman including within the Daintree NP. Recorded at 1200-1260 m asl within montane heathland on granitic derived soils.	**Low** Lack of suitable habitat for this species. The project site is outside the known elevational range for this species.

Common Name	Scientific Name	Status EPBC Act	Status NC Act	Preferred Habitat	Likelihood of Occurrence Within Project site
middle filmy-fern	*Polyphlebium endlicherianum*	E	V	A filmy fern that grows on rocks (often granite) in creeks and 'cool shady position' (AVH, 2022). Recorded as a lithophyte in or near streams in upper montane rainforest (Field *et al.*, 2022).	**Low** Lack of suitable habitat for this species. The project site is outside the known elevational range for this species.
	Polyscias bellendenkerensis	V	V	A small rainforest tree/shrub confined to Mount Bartle Frere, the Bellenden Ker Range, headwaters of Douglas Creek on the Daintree River and the Mount Pieter Botte area. Typically favours high altitude environments (Zich 2020a).	**Low** Suitable habitat is not present within the project site. The project site is outside the known elevational range for this species.
	Randia audasii		NT	Endemic to NEQ, restricted to the area between Cooktown, Cairns and Atherton. Altitudinal range from near sea level to 600 m. Grows as an understory tree in well-developed lowland and upland rain forest	**Confirmed** Suitable habitat is present within the project site. A single individual of this species was recorded within a landscaped garden bed on the southern bank of the Daintree River. This plant is not considered to be in the wild.
	Ristantia gouldii	V	V	Rainforest tree growing in well-developed upland rainforest environments. Altitudinal range 450-800 metres (Zich, 2020a).	**Low** The project site is outside the known elevational range for this species.

Common Name	Scientific Name	Status EPBC Act	Status NC Act	Preferred Habitat	Likelihood of Occurrence Within Project site
	Rhodamnia sessiliflora		E	Large shrub or small tree in the Myrtaceae family. It has large opposite leaves with a distinctive three veined appearance. Whitish hairs on new terminal shoots are distinctive for this species. A widespread species in the Wet Tropics growing 0-1000 m asl on a variety of sites. A characteristic component of rainforest regrowth (Zich *et al.*, 2022).	**Confirmed** This species was recorded in small numbers within RE 7.3.23a along the entire southern bank of the Daintree River where the project alignment is located.
	Rhodomyrtus effusa		E	Endemic to NEQ. Altitudinal range from near sea level to 200 m. Grows in disturbed or previously disturbed areas of lowland rain forest.	**Confirmed** Found in small numbers in REs 7.11.1a and 7.3.5a.
	Rhodomyrtus pervagata		E	Endemic to NEQ. Altitudinal range from 350-1250 m. Grows in well-developed upland and mountain rain forest. This species is favoured by disturbance and is a characteristic component of rain forest regrowth.	**Low** The project site is well below the known elevational range for this species. The nearest record is approx. 6km to the north on a densely forested ridge line.
	Ryparosa kurrangii		NT	Endemic to NEQ, restricted to the area between the Daintree River and Cape Tribulation. Altitudinal range small, from near sea level to 100 m. Grows as an understory tree in well-developed lowland rain forest.	**Moderate** Suitable well developed rainforest habitat is present within the project site. All records are clustered between Cape Tribulation and Diwan. The nearest record is approx. 6km to the north.

Common Name	Scientific Name	Status EPBC Act	Status NC Act	Preferred Habitat	Likelihood of Occurrence Within Project site
	Sarcopteryx montana		NT	Endemic to NEQ, restricted to the higher mountains between Thornton Peak and Mt Lewis. Altitudinal range from 950-1300 m. Grows in mountain rain forest.	**Low** The project site is outside the known elevation range for this species being restricted to high elevation mountain ranges. The nearest record is located approx. 11 km to the southwest of the project site on Thorntons Peak.
	Samadera baileyana		NT	An understory rainforest tree growing in the Wet Tropics region from Cape Tribulation to Innisfail (Zich, 2022).	**Low**
Tully penda	*Sphaerantia discolor*		V	Endemic to NEQ, restricted to the Russell and Johnstone River catchments west of Innisfail, Wright Creek near Edmonton and creeks in the Whyanbeel area. Altitudinal range from 150-300 m. Grows in well-developed lowland rain forest often close to creeks.	**Low** The project site is outside the known elevational range for this species. The nearest record is located approx. 8km to the southwest of the project site.
	Stenocarpus cryptocarpus		NT	A rainforest Proteaceae shrub/tree growing in well-developed upland and lowland rainforest between Cooktown and Innisfail (Zich, 2022).	**Low** Suitable habitat is present on the site. Nearest records occur 10km to the north of the project site.

Common Name	Scientific Name	Status EPBC Act	Status NC Act	Preferred Habitat	Likelihood of Occurrence Within Project site
fern-leaved stenocarpus	*Stenocarpus davallioides*		V	A tree in the Proteaceae family growing in well-developed upland rainforest. Known only from the Alexandra Logging Area, Thornton Peak and Mt Lewis. Grows at an altitude of 650-1200m asl (Zich *et al.,* 2020).	**Low** Suitable habitat is not present on the site. No proximate records occur to the project site.
	Strongylodon lucidus		NT	Occurs in NEQ. Altitudinal range from near sea level to 100 m. Grows in well-developed lowland rain forest. Also occurs in Malesia and the Pacific islands.	**Moderate** Nearest record is located 2 km east of the project site within RE 7.3.25.
	Trachymene geraniifolia		NT	Occurs in the coastal mountains of NEQ. Found occasionally in rainforest also in heath vegetation. Mostly restricted to elevated heathland vegetation on mountain peaks.	**Low** Suitable habitat does not occur within the project site.
	Tristellateia australasiae		NT	Occurs in CYP and NEQ. Altitudinal range from near sea level to 100 m. Grows in well-developed lowland rain forest. Also occurs in SE Asia and Malesia.	**Moderate** Suitable habitat is present on site. Nearest records are located 10km to the north and south of the project site. Most regional records are clustered around Cape tribulation which is >20 km to the north.

Common Name	Scientific Name	Status EPBC Act	Status NC Act	Preferred Habitat	Likelihood of Occurrence Within Project site
thin feather orchid	*Tropilis callitrophilis*	V	V	An epiphytic orchid that favours *Callitris macleayana* and *Austromyrtus* spp. and other myrtles, in or close to rainforest (DCCEEW, 2022).	**Low** Suitable habitat is not present on the site.
Cooktown Orchid	*Vappodes phalaenopsis*	V	V	A lithophytic orchid recorded from coastal ranges between Daintree and Cairns (DCCEEW, 2022).	**Low** The project site is outside of the known range of this species.
	Vrydagzynea grayi	E	E	Recorded from a single locality near the Daintree River. The single known location was cleared in the 1980s and this species has not since been recorded. Occurring in dense lowland rainforests, growing in well-drained loamy soil and litter on outcrops of decomposed shale. Known to flower between September and October.	**Low** Much of the project site is poorly drained which would exclude the known habitat for this species.
	Wilkiea sp. (McDowall Range J. G. Tracey 14552)		NT	Endemic to NEQ. Altitudinal range from 40-700 m. Grows as an understory tree in well-developed rain forest (Zich *et al.*, 2022).	Nearest record is located 10 km north of the project site
	Whyanbeelia terra-reginae		NT	Endemic to NEQ, restricted to the area between the Daintree and Johnstone Rivers. Altitudinal range from 100-400 m. Grows in well-developed lowland and upland rain forest (Zich *et al.*, 2022).	Nearest record is located 10 km south the project site

Common Name	Scientific Name	Status EPBC Act	Status NC Act	Preferred Habitat	Likelihood of Occurrence Within Project site
	Xanthophyllum fragrans		NT	Large leaf blades approximately 20 cm in length contain a pair of distinct glands and the leaf base either side of the midrib. Endemic to NEQ. Altitudinal range from near sea level to 1000 m. Grows in well-developed rain forest on a variety of sites (Zich *et al.*, 2022).	**Moderate** Nearest record is located 2.2 km northeast of the project site within RE 7.11.1a.
	Xanthostemon formosus	E	E	Endemic to NEQ, restricted to a few creeks between the Daintree River and Cape Tribulation. Altitudinal range quite small, from near sea level to 100 m. Grows as a rheophyte along rocky or bouldery creeks flowing through rain forest (Zich *et al.,* 2022).	**Low** Nearest record is located 2 km east of the project site within RE 7.3.25.
velvet jewel orchid	*Zeuxine polygonoides*	V	V	A terrestrial orchid with leaf bearing stems 5-10cm long with 3-5 leaves measuring 3-8cm long. It grows in rainforest sites within well-developed leaf litter. It is endemic to north-eastern Queensland on the coastal ranges between Daintree and Cairns at altitudes of 450-820m.	**Low** The project site is outside the known elevational range for this species. No proximate records.

Appendix E Flora species list

Form	Family	Species Name	Common Name	NC Act	EPBC Act	Fisheries Act	Vine forest/paperbark	Mangroves	Exotic sp.	EDL
Cycad	Zamiaceae	*Bowenia spectabilis*		SLC	LC		●			
Epiphyte	Ophioglossaceae	*Ophioderma pendulum*	old-world adder's-tongue	LC	LC		●			
Epiphyte	Orchidaceae	*Acriopsis emarginata*	pale chandelier orchid	VU	VU			●		
Epiphyte	Orchidaceae	*Cymbidium madidum*	giant boat-lip orchid	SLC	LC		●			
Epiphyte	Orchidaceae	*Dendrobium nindii*	blue antler orchid	EN	EN			●		
Epiphyte	Orchidaceae	*Dendrobium teretifolium*	pencil orchid	SLC	LC		●			
Epiphyte	Orchidaceae	*Dendrobium trilamellatum*	fragrant tea-tree orchid	SLC	LC		●			
Epiphyte	Orchidaceae	*Dendrobium undulatum*	golden orchid	SLC	LC		●	●		
Epiphyte	Orchidaceae	*Luisia atacta*	smooth velvet orchid	SLC	LC			●		
Epiphyte	Orchidaceae	*Oberonia crateriformis*	cratered fairy-orchid	SLC	LC			●		
Epiphyte	Orchidaceae	*Pinalia moluccana*	common gremlin orchid	SLC	LC			●		
Epiphyte	Rubiaceae	*Myrmecodia beccarii*	ant-plant	VU	VU			●		
Fern and allies	Aspleniaceae	*Asplenium nidus*	bird's-nest fern	LC	LC		●			
Fern and allies	Blechnaceae	*Stenochlaena palustris*		LC	LC			●		
Fern and allies	Cyatheaceae	*Cyathea rebeccae*	black tree-fern	LC	LC		●			
Fern and allies	Gleicheniaceae	*Dicranopteris linearis*	uluhe	LC	LC		●			
Fern and allies	Lycopodiaceae	*Phlegmariurus harmsii*	coarse tassel-fern	SLC	LC		●			
Fern and allies	Lygodiaceae	*Lygodium microphyllum*	climbing maidenhair-fern	LC	LC		●	●		
Fern and allies	Nephrolepidaceae	*Nephrolepis biserrata*	fishbone fern	LC	LC		●		●	
Fern and allies	Polypodiaceae	*Aglaomorpha rigidula*	basket fern	LC	LC		●	●		
Fern and allies	Polypodiaceae	*Platycerium hillii*	northern elkhorn	LC	LC		●			
Fern and allies	Polypodiaceae	*Pyrrosia longifolia*		LC	LC		●			
Fern and allies	Pteridaceae	*Acrostichum speciosum*	mangrove fern	LC	LC	MP		●		
Fern and allies	Pteridaceae	*Adiantum diaphanum*	filmy maidenhair-fern	LC	LC		●			
Herbs and graminoids	Acanthaceae	*Pseuderanthemum variable*	love flower	LC	LC		●			
Herbs and graminoids	Amaranthaceae	*Alternanthera ficoidea*		LC	LC		●		●	
Herbs and graminoids	Amaryllidaceae	*Crinum pedunculatum*	swamp lily	LC	LC			●		
Herbs and graminoids	Apiaceae	*Centella asiatica*	centella	LC	LC		●	●		
Herbs and graminoids	Asparagaceae	*Lomandra hystrix*	creek mat-rush	LC	LC		●			
Herbs and graminoids	Asparagaceae	*Sansevieria* sp.	mother-in-law's-tongue	LC	LC		●			
Herbs and graminoids	Asphodelaceae	*Dianella atraxis*		LC	LC		●			
Herbs and graminoids	Asphodelaceae	*Dianella bambusifolia*		LC	LC		●			
Herbs and graminoids	Asteraceae	*Ageratum houstonianum*	blue billygoat-weed	LC	LC		●		●	
Herbs and graminoids	Asteraceae	*Eclipta prostrata*	false daisy	LC	LC			●	●	
Herbs and graminoids	Asteraceae	*Elephantopus scaber*	prickly-leaved elephant's foot	LC	LC		●		●	
Herbs and graminoids	Asteraceae	*Sigesbeckia orientalis*	common st Paul's-wort	LC	LC		●			
Herbs and graminoids	Asteraceae	*Spagneticola trilobata*	Singapore daisy	LC	LC			●	●	

Form	Family	Species Name	Common Name	NC Act	EPBC Act	Fisheries Act	Vine forest/paperbark	Mangroves	Exotic sp.	EDL
Herbs and graminoids	Commelinaceae	*Aneilema acuminatum*		LC	LC		●			
Herbs and graminoids	Commelinaceae	*Commelina benghalensis*	Benghal dayflower	LC	LC		●		●	
Herbs and graminoids	Cyperaceae	*Baumea rubiginosa*		LC	LC		●			
Herbs and graminoids	Cyperaceae	*Cyperus aromaticus*	navua sedge	LC	LC		●		●	
Herbs and graminoids	Cyperaceae	*Cyperus haspan*	dwarf papyrus sedge	LC	LC					
Herbs and graminoids	Cyperaceae	*Gahnia sieberiana*	small-fruited saw-sedge	LC	LC		●			
Herbs and graminoids	Fabaceae	*Aeschynomene indica*	budda pea	LC	LC		●			
Herbs and graminoids	Fabaceae	*Centrosema molle*	butterfly pea	LC	LC		●		●	
Herbs and graminoids	Fabaceae	*Crotalaria pallida*	smooth crotalaria	LC	LC		●		●	
Herbs and graminoids	Fabaceae	*Dalbergia candenatensis*		LC	LC		●		●	
Herbs and graminoids	Fabaceae	*Macroptilium atropurpureum*	siratro	LC	LC		●		●	
Herbs and graminoids	Fabaceae	*Mimosa pudica*	sensitive-plant	LC	LC		●		●	
Herbs and graminoids	Malvaceae	*Abelmoschus moschatus* subsp. *tuberosus*	native marsh-mallow	LC	LC		●			
Herbs and graminoids	Malvaceae	*Sida acuta*	common wireweed	LC	LC				●	
Herbs and graminoids	Melastomataceae	*Heterotis rotundifolia*	Spanish shawl	LC	LC		●		●	
Herbs and graminoids	Poaceae	*Axonocarpus compressus*	broad-leaved carpet grass	LC	LC				●	
Herbs and graminoids	Poaceae	*Eragrostis* sp.		LC	LC		●			
Herbs and graminoids	Poaceae	*Hymenachne amplexicaulis*	olive hymenachne	LC	LC		●		●	
Herbs and graminoids	Poaceae	*Megathyrsus maximus* var. *maximus*	green panic	LC	LC		●		●	
Herbs and graminoids	Poaceae	*Oplismenus* sp.		LC	LC		●			
Herbs and graminoids	Poaceae	*Sporobolus virginicus*	saltwater couch	LC	LC	MP	●	●		
Herbs and graminoids	Polygalaceae	*Polygala paniculata*	deep heat weed	LC	LC		●		●	
Herbs and graminoids	Rubiaceae	*Spermacoce latifolia*	winged false buttonweed	LC	LC		●		●	
Herbs and graminoids	Verbenaceae	*Stachytarpheta jamaicensis*	snakeweed	LC	LC		●		●	
Parasite	Loranthaceae	*Amylotheca dictyophleba*		LC	LC		●			
Parasite	Loranthaceae	*Dendrophthoe curvata*		LC	LC			●		
Shrub	Acanthaceae	*Acanthus ilicifolius*	holly mangrove	LC	LC	MP		●		
Shrub	Annonaceae	*Xylopia maccreae*		LC	LC		●			
Shrub	Apocynaceae	*Tabernaemontana orientalis*	banana bush	LC	LC		●			
Shrub	Apocynaceae	*Wrightia laevis*		LC	LC		●			
Shrub	Araceae	*Colocasia esculenta*	taro	LC	LC			●	●	
Shrub	Arecaceae	*Calamus australis*	wait-a-while	LC	LC		●			
Shrub	Arecaceae	*Licuala ramsayi*	fan palm	LC	LC		●			
Shrub	Asparagaceae	*Cordyline cannifolia*		LC	LC		●			
Shrub	Asparagaceae	*Dracaena fragrans*	corn plant	LC	LC		●		●	
Shrub	Bromeliaceae	*Ananas comsus*	pineapple	LC	LC		●		●	
Shrub	Calophyllaceae	*Calophyllum australianum*		LC	LC		●			
Shrub	Cannabaceae	*Trema* sp.		LC	LC		●			
Shrub	Costaceae	*Cheilocostus speciosus*		LC	LC		●		●	

Form	Family	Species Name	Common Name	NC Act	EPBC Act	Fisheries Act	Vine forest/paperbark	Mangroves	Exotic sp.	EDL
Shrub	Ebenaceae	*Diospyros* sp.		LC	LC		●			
Shrub	Euphorbiaceae	*Breynia cernua*	fart bush	LC	LC		●			
Shrub	Euphorbiaceae	*Excoecaria agallocha*	blind-your-eye mangrove	LC	LC	MP		●		
Shrub	Euphorbiaceae	*Homalanthus novo-guineense*	bleeding heart	LC	LC		●			
Shrub	Euphorbiaceae	*Macaranga subdentata*	needlebark	LC	LC		●			
Shrub	Fabaceae	*Archidendron lucyi*	scarlet bean	LC	LC		●			
Shrub	Heliconiaceae	*Heliconia psittacorum*	parrot heliconia	LC	LC		●		●	
Shrub	Lamiaceae	*Clerodendrum phlomidis*		LC	LC		●			
Shrub	Lamiaceae	*Gmelina fasciculiflora*	northern white beech	LC	LC		●			
Shrub	Lauraceae	*Beilschmiedia obtusifolia*	blush walnut	LC	LC		●			
Shrub	Lauraceae	*Cryptocarya hypospodia*	white sycamore	LC	LC		●			
Shrub	Lauraceae	*Cryptocarya laevigata*	glossy laurel	LC	LC		●			
Shrub	Lauraceae	*Cryptocarya murrayi*	Murray's laurel	LC	LC		●			
Shrub	Lauraceae	*Litsea bindoniana*	big-leaved bollywood	LC	LC		●			
Shrub	Lauraceae	*Litsea leefeana*	brown bolly gum	LC	LC		●			
Shrub	Lauraceae	*Neolitsea dealbata*	white bolly gum	LC	LC		●			
Shrub	Malvaceae	*Sterculia quadrifida*	peanut tree	LC	LC		●			
Shrub	Malvaceae	*Urena lobata*	Congo jute	LC	LC			●	●	
Shrub	Melastomataceae	*Melastoma malabathricum*	blue-tongue	LC	LC		●			
Shrub	Meliaceae	*Dysoxylum arborescens*	Mossman mahogany	LC	LC		●			
Shrub	Monimiaceae	*Austromatthaea elegans*		LC	LC		●			
Shrub	Monimiaceae	*Wilkiea pubescens*		LC	LC		●			
Shrub	Moraceae	*Ficus congesta*	red-leaved fig	LC	LC		●			
Shrub	Musaceae	*Musa* sp.	banana	LC	LC		●		●	
Shrub	Myristicaceae	*Myristica globosa*	native nutmeg	LC	LC		●			
Shrub	Myristicaceae	*Myristica insipida*	Queensland nutmeg	LC	LC		●			
Shrub	Myrtaceae	*Archirhodomyrtus beckleri*	small-leaved myrtle	LC	LC		●			
Shrub	Myrtaceae	*Rhodamnia sessiliflora*	iron malletwood	EN	LC		●			
Shrub	Myrtaceae	*Rhodomyrtus effusa*		EN	LC		●			
Shrub	Myrtaceae	*Rhodomyrtus macrocarpa*		LC	LC		●			
Shrub	Pandanaceae	*Pandanus gemmifer*	pup pandan	LC	LC		●			
Shrub	Phyllanthaceae	*Phyllanthus cuscutiflorus*	pink phyllanthus	LC	LC		●			
Shrub	Poaceae	*Bambusa* sp.		LC	LC		●		●	
Shrub	Primulaceae	*Aegiceras corniculatum*	river mangrove	LC	LC	MP		●		
Shrub	Primulaceae	*Myrsine porosa*	red muttonwood	LC	LC		●			
Shrub	Proteaceae	*Grevillea edelfeltii*	white oak	LC	LC		●			
Shrub	Proteaceae	*Helicia nortoniana*		LC	LC		●			
Shrub	Rubiaceae	*Cyclophyllum coprosmoides*	coast canthium	LC	LC		●			
Shrub	Rubiaceae	*Cyclophyllum multiflorum*		LC	LC		●			

Form	Family	Species Name	Common Name	NC Act	EPBC Act	Fisheries Act	Vine forest/paperbark	Mangroves	Exotic sp.	EDL
Shrub	Rubiaceae	*Randia audasii*	Daintree gardenia	NT	LC		●			
Shrub	Salicaceae	*Scolopia braunii*	flintwood	LC	LC		●			
Shrub	Sapindaceae	*Allophylus cobbe*	titberry	LC	LC		●			
Shrub	Sapindaceae	*Cupaniopsis foveolata*	white tamarind	LC	LC		●			
Shrub	Sapindaceae	*Harpullia rhyticarpa*	slender harpullia	LC	LC		●			
Shrub	Symplocaceae	*Symplocos cyanocarpa*		LC	LC		●			
Shrub	Thymelaeaceae	*Phaleria clerodendrum*	scented daphne	LC	LC		●			
Shrub	Zingiberaceae	*Hornstedtia scottiana*	native cardamom	LC	LC		●			
Tree	Anacardiaceae	*Blepharocarya involucrigera*	rose butternut	LC	LC		●			
Tree	Anacardiaceae	*Buchanania arborescens*	sparrow's mango	LC	LC		●			
Tree	Anacardiaceae	*Euroschinus falcatus*	maidenwood	LC	LC		●			
Tree	Anacardiaceae	*Mangifera indica*	mango	LC	LC		●		●	
Tree	Apocynaceae	*Alstonia muelleriana*	hard milkwood	LC	LC		●			●
Tree	Apocynaceae	*Alstonia scholaris*	blackboard tree	LC	LC		●			
Tree	Apocynaceae	*Cerbera floribunda*	cassowary plum	LC	LC		●			●
Tree	Araliaceae	*Heptapleurum actinophyllum*	umbrella tree	LC	LC		●			
Tree	Araliaceae	*Polyscias australiana*	ivory basswood	LC	LC		●			
Tree	Arecaceae	*Archontophoenix alexandrae*	alexandra palm	LC	LC		●			
Tree	Arecaceae	*Caryota mitis*	fishtail palm	LC	LC		●		●	
Tree	Arecaceae	*Cocos nucifera*	coconut	LC	LC		●			
Tree	Arecaceae	*Normanbya normanbyi*	black palm	LC	LC		●			
Tree	Arecaceae	*Ptychosperma elegans*	solitaire palm	LC	LC		●			
Tree	Bignoniaceae	*Deplanchea tetraphylla*	golden bouquet tree	LC	LC		●			
Tree	Calophyllaceae	*Calophyllum sil*	alligatorbark	LC	LC		●			
Tree	Clusiaceae	*Garcinia warrenii*	native mangosteen	LC	LC		●			
Tree	Combretaceae	*Terminalia sericocarpa*	sweet damson	LC	LC		●	●		
Tree	Dilleniaceae	*Dillenia alata*	red beech	LC	LC			●		
Tree	Elaeocarpaceae	*Elaeocarpus angustifolius*	blue quandong	LC	LC		●			●
Tree	Escalloniaceae	*Polyosma hirsuta*	hairy polyosma	LC	LC		●			
Tree	Euphorbiaceae	*Aleurites rockinghamensis*	candelnut	LC	LC		●			
Tree	Euphorbiaceae	*Macaranga involucrata* var. *mallotoides*	brown macaranga	LC	LC		●			
Tree	Euphorbiaceae	*Macaranga tanarius*	macaranga	LC	LC		●			
Tree	Euphorbiaceae	*Mallotus paniculatus*		LC	LC		●			
Tree	Euphorbiaceae	*Mallotus philippensis*	red kamala	LC	LC		●			
Tree	Fabaceae	*Cassia fistula*	golden shower	LC	LC		●		●	
Tree	Fabaceae	*Castanosperma australe*	black bean	LC	LC		●			
Tree	Fabaceae	*Cynometra iripa*	wrinkle-pod mangrove	LC	LC	MP		●		
Tree	Fabaceae	*Millettia pinnata*	Indian beech	LC	LC		●			
Tree	Lamiaceae	*Premna serratifolia*	coastal premna	LC	LC			●		

Form	Family	Species Name	Common Name	NC Act	EPBC Act	Fisheries Act	Vine forest/paperbark	Mangroves	Exotic sp.	EDL
Tree	Lauraceae	*Cryptocarya mackinnoniana*		LC	LC		●			
Tree	Lauraceae	*Endiandra acuminata*	brown walnut	LC	LC		●			
Tree	Lauraceae	*Endiandra hypotephra*	northern rose walnut	LC	LC		●			
Tree	Lecythidaceae	*Barringtonia racemosa*	powder-puff tree	LC	LC	MP		●		
Tree	Lythraceae	*Sonneratia caseolaris*	apple mangrove	LC	LC	MP		●		●
Tree	Malvaceae	*Brachychiton acerifolius*	Illawarra flame tree	LC	LC		●			
Tree	Malvaceae	*Commersonia bartramia*	brown kurrajong	LC	LC		●			
Tree	Malvaceae	*Heritiera littoralis*	looking-glass mangrove	LC	LC			●		●
Tree	Malvaceae	*Hibiscus tiliaceus*	cottonwood	LC	LC	MP		●		●
Tree	Malvaceae	*Thespesia populnea*	portia tree	LC	LC	MP		●		
Tree	Meliaceae	*Aglaia sapindina*	boodyarra	LC	LC		●			
Tree	Meliaceae	*Didymocheton gaudichaudianus*	ivory mahogany	LC	LC		●			
Tree	Meliaceae	*Dysoxylum oppositifolium*		LC	LC		●			
Tree	Meliaceae	*Epicharis parasitica*	yellow mahogany	LC	LC		●			
Tree	Meliaceae	*Xylocarpus granatum*	cannonball mangrove	LC	LC	MP		●		
Tree	Mimosaceae	*Acacia celsa*	brown salwood	LC	LC		●	●		●
Tree	Mimosaceae	*Acacia mangium*	forest mangrove wattle	LC	LC		●			
Tree	Moraceae	*Artocarpus altilis*	breadfruit	LC	LC		●		●	
Tree	Moraceae	*Ficus benjamina*	weeping fig	LC	LC		●			
Tree	Moraceae	*Ficus microcarpa*	small-leaved fig	LC	LC		●			
Tree	Moraceae	*Ficus septica*	septic fig	LC	LC		●			
Tree	Moraceae	*Ficus variegata*	variegated fig	LC	LC		●			
Tree	Myrtaceae	*Corymbia torelliana*	cadaghi	LC	LC		●			
Tree	Myrtaceae	*Melaleuca cajuputi*	cajuput	LC	LC		●			
Tree	Myrtaceae	*Melaleuca leucadendra*	weeping tea-tree	LC	LC		●			
Tree	Myrtaceae	*Melaleuca quinquenervia*	broad-leaved tea-tree	LC	LC		●			
Tree	Myrtaceae	*Syzygium angophoroides*	swamp satinash	LC	LC		●			●
Tree	Myrtaceae	*Syzygium hemilampra*	blue satinash	LC	LC		●			
Tree	Myrtaceae	*Syzygium monospermum*	Daintree satinash	LC	LC		●			
Tree	Myrtaceae	*Xanthostemon chrysanthus*	golden penda	LC	LC		●			
Tree	Myrtaceae	*Xanthostemon whitei*	red penda	LC	LC		●			
Tree	Oleaceae	*Chionanthus ramiflorus*	northern olive	LC	LC		●			
Tree	Pandanaceae	*Pandanus solms-laubachii*	swamp pandan	LC	LC			●		
Tree	Phyllanthaceae	*Glochidion philippicum*		LC	LC		●			
Tree	Phyllanthaceae	*Glochidion sumatranum*	umbrella cheese tree	LC	LC		●			
Tree	Podocarpaceae	*Podocarpus grayi*	brown pine	LC	LC		●			
Tree	Proteaceae	*Cardwellia sublimis*	northern silky oak	LC	LC		●			
Tree	Proteaceae	*Darlingia darlingiana*	brown silky oak	LC	LC		●			
Tree	Rhamnaceae	*Alphitonia whitei*	white ash	LC	LC		●			

Form	Family	Species Name	Common Name	NC Act	EPBC Act	Fisheries Act	Vine forest/paperbark	Mangroves	Exotic sp.	EDL
Tree	Rhizophoraceae	*Bruguiera gymnorhiza*	large-leaved orange mangrove	LC	LC	MP		●		●
Tree	Rhizophoraceae	*Bruguiera parviflora*	small-flowered orange mangrove	LC	LC	MP		●		
Tree	Rhizophoraceae	*Bruguiera sexangula*	upriver orange mangrove	LC	LC	MP		●		
Tree	Rhizophoraceae	*Carallia brachiata*	corky-bark	LC	LC	MP	●	●		
Tree	Rhizophoraceae	*Rhizophora stylosa*	spotted mangrove	LC	LC	MP		●		
Tree	Rubiaceae	*Atractocarpus fitzalanii*	native gardenia	LC	LC		●			
Tree	Rubiaceae	*Atractocarpus sessilis*	false gardenia	LC	LC		●			
Tree	Rubiaceae	*Nauclea orientalis*	Leichhardt tree	LC	LC		●			
Tree	Rubiaceae	*Timonius timon* var. *timon*	timonius	LC	LC		●			
Tree	Rutaceae	*Melicope elleryana*	pink-flowered doughwood	LC	LC		●			
Tree	Sapindaceae	*Lepiderema sericolignis*	silkwood	LC	LC		●			
Tree	Sapindaceae	*Litchi chinensis*	lychee	LC	LC		●		●	
Tree	Sapindaceae	*Mischocarpus exangulatus*	red bell	LC	LC		●			
Tree	Sapindaceae	*Rhysotoechia robertsonii*	Robert's tuckeroo	LC	LC		●			
Tree	Sapindaceae	*Toechima erythrocarpum*	pink tamarind	LC	LC		●			
Vine	Apocynaceae	*Allamanda cathartica*	yellow allamanda	LC	LC		●		●	
Vine	Apocynaceae	*Alyxia spicata*	chainfruit	LC	LC		●			
Vine	Apocynaceae	*Dischidia nummularia*	button-orchid	LC	LC			●		
Vine	Apocynaceae	*Gymnanthera oblonga*	harpoon bud	LC	LC		●			
Vine	Apocynaceae	*Hoya australis*	slender wax-vine	LC	LC		●			
Vine	Apocynaceae	*Hoya pottsii*	claret hoya	LC	LC			●		
Vine	Apocynaceae	*Ichnocarpus frutescens*	blackvine	LC	LC		●			
Vine	Apocynaceae	*Leichhardtia* sp.		LC	LC		●			
Vine	Apocynaceae	*Melodinus acutifolius*		LC	LC		●			
Vine	Araceae	*Epipremnum aureum*	money plant	LC	LC			●	●	
Vine	Araceae	*Epipremnum pinnatum*	centipede tongavine	LC	LC		●			
Vine	Araceae	*Philodendron* sp.		LC	LC		●		●	
Vine	Aristolochiaceae	*Aristolochia deltantha*		LC	LC					
Vine	Asparagaceae	*Eustrephus latifolius*	wombat-berry	LC	LC		●			
Vine	Aspleniaceae	*Asplenium nidus*	bird's-nest fern	LC	LC		●			
Vine	Asteraceae	*Calyptocarpus vialis*	creeping cinderella weed	LC	LC		●		●	
Vine	Asteraceae	*Emilia sonchifolia*	emilia	LC	LC		●		●	
Vine	Celastraceae	*Salacia scandens*		LC	LC		●			
Vine	Connaraceae	*Connarus conchocarpus*	shell vine	LC	LC		●			
Vine	Convolvulaceae	*Decalobanthus peltatus*	big-leaf merremia	LC	LC		●			
Vine	Dilleniaceae	*Hibbertia scandens*	snake vine	LC	LC		●			
Vine	Dilleniaceae	*Tetracera nordtiana*	small-leaved fire vine	LC	LC		●			
Vine	Dioscoreaceae	*Dioscorea transversa*	pencil yam	LC	LC		●			
Vine	Fabaceae	*Austrosteenisia blackii*	blood vine	LC	LC		●			

Form	Family	Species Name	Common Name	NC Act	EPBC Act	Fisheries Act	Vine forest/paperbark	Mangroves	Exotic sp.	EDL
Vine	Fabaceae	*Calopogonium mucunoides*	calopo	LC	LC		●		●	
Vine	Fabaceae	*Centrosema molle*	centrosema	LC	LC				●	
Vine	Fabaceae	*Dalbergia candenatensis*		LC	LC		●			
Vine	Fabaceae	*Derris trifoliata*	derris	LC	LC		●			
Vine	Fabaceae	*Mucuna gigantea*	burney bean	LC	LC		●			
Vine	Flagellariaceae	*Flagellaria indica*	whipstick-vine	LC	LC		●			
Vine	Lamiaceae	*Hyptis capitata*	false ironwort	LC	LC			●	●	
Vine	Menispermaceae	*Hypserpa laurina*		LC	LC		●			
Vine	Moraceae	*Malaisia scandens*	burny vine	LC	LC		●			
Vine	Pandanaceae	*Freycinetia excelsa*		LC	LC		●			
Vine	Pandanaceae	*Freycinetia scandens*		LC	LC		●			
Vine	Passifloraceae	*Adenia heterophylla*	native passionfruit	LC	LC		●			
Vine	Piperaceae	*Piper caninum*	common piper	LC	LC		●			
Vine	Piperaceae	*Piper hederaceum* var. *hederaceum*	native pepper vine	LC	LC		●			
Vine	Smilacaceae	*Smilax australis*	lawyer vine	LC	LC		●			
Vine	Vitaceae	*Cayratia japonica*	bushkiller	LC	LC		●			
Vine	Vitaceae	*Cayratia saponaria*		LC	LC		●			
Vine	Vitaceae	*Cissus hastata*		LC	LC		●			
Vine	Vitaceae	*Cissus penninervis*	native grape	LC	LC		●			
TOTALS			**250**				**211**	**43**	**42**	**9**

NB. Values highlighted in red indicate protected plants pursuant to either or both the *NC* or *EPBC Acts*. Orange-highlighted rows indicate plants protected as 'marine plants' pursuant to the Queensland *Fisheries Act 1994*. LC = least concern, SLC = special least concern, NT = near threatened, VU = vulnerable, EN = endangered, CE = critically endangered, MP = marine plant.

Appendix M

State Code Responses (SDAP)

State code 7: Maritime safety

State Development Assessment Provisions Supporting Guideline – State code 7: Maritime Safety which provides direction on how to address this code.

Table 7.1: Operational work

Performance outcomes	Acceptable outcomes	Response
Visibility		
PO1 Lighting does not distract attention away from, or otherwise reduce the effectiveness of, **aids to navigation**.	**AO1.1** Lights are shielded to prevent glare or reflection. AND **AO1.2** Development does not include flood lighting, flashing lights, flickering lights, or lights coloured green, blue or red.	**Able to comply with AO1.1** The lights associated with the ferry and the associated facilities are able to be appropriately shielded and can avoid the use of flashing, flickering or coloured lights where not operationally necessary.
PO2 Development is designed and constructed to be visible to mariners, to avoid the risk of collision.	No acceptable outcome is prescribed.	**Complies with PO2** The ferry is well known to mariners and the upgraded ferry would be appropriately identified to ensure visibility and avoid collision.
Aids to navigation		
PO3 Development does not interfere with the operation of **aids to navigation**.	**AO3.1** Development does not destabilise **aids to navigation, including** ground tackle. AND **AO3.2** Development does not obstruct sight lines to **aids to navigation**. AND **AO3.3** Development keeps sight lines of any **aids to navigation** which cross the land clear of obstructions. AND	**Complies with AO3.1-AO3.5** The proposed ferry upgrade would not affect existing navigation aids and sightlines and would not result in electromagnetic interference.

Performance outcomes	Acceptable outcomes	Response
	AO3.4 Development does not interfere with existing access to **aids to navigation** for maintenance purposes. AND **AO3.5** Development does not result in electrical or electro-magnetic emissions that impede the operation of **aids to navigation**.	
Protection of navigable waterways		
PO4 Development does not obstruct the safe movement of vessels in a **navigable waterway**.	No acceptable outcome is prescribed.	**Complies with PO4** The proposed upgraded ferry and facilities has been designed to minimise disruption to vessels in the waterway.

State code 8: Coastal development and tidal works

State Development Assessment Provisions Guidance Material: State code 8: Coastal Development and tidal works provides direction on how to address this code.

Table 8.1: All development

Performance outcomes	Response
Development in the erosion prone area	
PO1 Development is only permitted in the **erosion prone area** where it: 1. is one of the following types of development: a. **coastal-dependent development**; or b. **temporary, readily relocatable or able to be abandoned**; or c. **essential community infrastructure**; or d. **redevelopment** of an existing permanent building or structure that cannot be relocated or abandoned; and 2. cannot feasibly be located elsewhere; or 3. is located landward of: a. a **fit for purpose revetment**; or b. a proposed revetment that is consistent with: i. an **agreement with a local government**; or ii. the alignment of adjacent lawful revetments; or 4. is on a lot less than 2000m^2 where a **coastal building line** is present.	**Complies with PO1** The proposal is for upgrade works to the Daintree River ferry and associated infrastructure that is located on the section of the Daintree River that is subject to tidal influence. This is coastal dependent development and cannot be located elsewhere.
PO2 Development (other than **coastal protection work**) in the **erosion prone area**: 1. does not adversely impact **coastal processes**; and 2. ensures that the protective function of landforms and vegetation is maintained.	**Complies with PO2** The works are for the upgrade of the existing ferry crossing and infrastructure. The upgraded ferry ramps would incorporate rock armour walls that would maintain the landforms and not adversely affect coastal processes.

Performance outcomes	Response
Note: In considering reconfiguring a lot applications, the State may require land in the **erosion prone area** to be surrendered to the State for coastal management purposes under the *Coastal Protection and Management Act 1995*. Where the planning chief executive receives a copy of a land surrender requirement or proposed land surrender notice under the *Coastal Protection and Management Act 1995*, this must be considered in assessing the application.	
PO3 Development is sited, designed and constructed to limit the risk of impacts of **coastal erosion** to an acceptable level by: 1. locating development outside the **erosion prone area**; or 2. mitigating or otherwise accommodating the risks posed by **coastal erosion.**	**Complies with PO3** The proposal is for operational works for upgrade of the existing Daintree River ferry. The upgraded ferry ramps and associated infrastructure have been designed to maintain current tidal processes and limit coastal erosion.
PO4 Development in the **erosion prone area** does not significantly increase the risk or impacts to people and property from **coastal erosion**.	**Complies with PO4** The proposal is for operational works for upgrade of the existing Daintree River ferry. There would be no significant increase in impacts to people or property from coastal erosion as a result of the development.
PO5 Development (other than **coastal protection work**) in the **erosion prone area** does not directly or indirectly increase the severity of **coastal erosion** either on or off the site.	**Complies with PO5** The upgrade of the ferry crossing and the ferry ramps would not increase the severity of coastal erosion.
PO6 In **erosion prone areas** where a **coastal building line** is present, building work is located landward of the **coastal building line** unless **coastal protection work** has been constructed to protect the development.	**Not applicable** The site is not affected by a coastal building line.
Artificial waterways	
PO7 Development of **artificial waterways**, canals and **dry-land marinas** conserves **coastal resources** by: 1. ensuring changes to water flows, water levels and sediment movement do not adversely impact the natural waterway to which it is connected; 2. demonstrating appropriate storage, treatment and disposal of **dredged material** for the life of the development.	**Not applicable** The proposal does not involve artificial waterways.

Performance outcomes	Response
Coastal protection work	
PO8 Works for **beach nourishment** minimises adverse impacts on **coastal processes**.	**Not applicable** The proposal does not involve beach nourishment works.
PO9 Works for **beach nourishment** do not increase the severity of erosion on adjacent land.	**Not applicable** The proposal does not involve beach nourishment works.
PO10 Erosion control structures (excluding revetments) are only constructed where there is an **imminent threat** to **significant buildings or infrastructure**, and there is no feasible option for either: 1. **beach nourishment**; or 2. relocation or abandonment of structures.	**Not applicable** Erosion control structures are not proposed.
PO11 Erosion control structures (revetments only) are only constructed where: 1. there is an **imminent threat** to **significant buildings or infrastructure**, and there is no feasible option for either: a. **beach nourishment**; or b. relocation or abandonment of structures; or 2. the development: a. is in a consistent alignment with adjacent lawful revetments; or b. is consistent with an **agreement with a local government** that a revetment is appropriate in the proposed location.	**Not applicable** Erosion control structures are not proposed.
PO12 Erosion control structures minimise interference with **coastal processes** and reduce the severity of erosion on adjacent land.	**Not applicable** Erosion control structures are not proposed.
Water quality	
PO13 Development:	**Complies with PO13**

Performance outcomes	Response
1. maintains or enhances **environmental values** of receiving waters; 2. achieves the **water quality objectives** of Queensland waters; 3. avoids the release of **prescribed water contaminants** to **tidal waters**.	The proposed upgrade to the Daintree Ferry would not alter hydrological processes or result in an increase in contaminants being released into tidal waters.
Public use of and access to State coastal land	
PO14 Development maintains or enhances public use of and access to and along **State coastal land** (except where this is contrary to the protection of **coastal resources** or public safety).	**Complies with PO14** The works are for upgrades and enhancements to the existing ferry crossing and infrastructure, including the road approaches. The proposed works include pedestrian pathways to the ferry ramp. The ability for the public to access to foreshore would be improved as a result of the development..
PO15 Private marine development does not reduce public use of and access to **State coastal land** and ensures that works: 1. are used for **marine access purposes** only; 2. minimise the use of **State coastal land**; 3. are designed to accommodate the berthing of one vessel only per waterfront residence; 4. do not interfere with access between **navigable waterways** and adjacent properties.	**Not applicable** The proposal is not for marine development.
PO16 Development does not reduce public use of and access to **State coastal land** and ensures that **erosion control structures**, intended to protect a freehold or leasehold (not State land) premises, are wholly located within the lot: 1. except where impeded by **significant buildings or infrastructure** that cannot be removed or relocated; or 2. for revetments the development is: a. in a consistent alignment with adjacent lawful revetments; or b. consistent with an **agreement with a local government** that a revetment is appropriate in the proposed location.	**Complies with PO16** The works are for upgrades and enhancements to the existing ferry crossing and infrastructure, including the road approaches. The proposed works include pedestrian pathways to the ferry ramp. The ability for the public to access to foreshore would be improved as a result of the development.

Performance outcomes	Response
Matters of state environmental significance	
PO17 Development is designed and sited to: 1. avoid impacts on **matters of state environmental significance**; or 2. minimise and mitigate impacts on **matters of state environmental significance** after demonstrating avoidance is not reasonably possible; and 3. provide an **offset** if, after demonstrating all reasonable avoidance, minimisation and mitigation measures are undertaken, the development results in an acceptable **significant residual impact** on a **matter of state environmental significance**. Statutory note: For Brisbane core port land, an offset may only be applied to development on land identified as E1 Conservation/Buffer, E2 Open Space or Buffer/Investigation in the Brisbane Port LUP precinct plan.	**Complies with PO17** The proposed development would have minor impacts on Matters of State Environmental Significance. These impacts have been minimised whilst allowing for the delivery of this critical infrastructure. Where impacts are unavoidable, environmental offsets have been recommended. Refer to the Ecological Assessment and Environmental Management plan provided at **Appendix J and K**, respectively.

Table 8.2: All operational work

Performance outcomes	Response
Private marine development	
PO18 Private marine development is designed and constructed to maintain existing waterway banks in their natural state and not require: 1. **coastal protection work**; 2. shoreline or riverbank hardening; 3. **dredging** for **marine access purposes**.	**Not applicable** The proposal is not for private marine development.
Disposal of solid waste or dredged material from artificial waterways	
PO19 Solid waste from land and **dredged material** from **artificial waterways** is not disposed of in **tidal water** unless it is for **beneficial reuse**.	**Complies with PO19** No solid waste would be disposed of in tidal waters as a result of this application.
Disposal of dredged material other than from artificial waterways	

Performance outcomes	Response
PO20 Dredged material is returned to **tidal water** where the material is needed to maintain **coastal processes** and sediment volume.	**Complies with PO20** The spoil resulting from the maintenance dredging would not be required to maintain coastal processes or sediment volume.
PO21 Where the **dredged material** is not needed to maintain **coastal processes** and sediment volume, the quantity of **dredged material** disposed to **tidal water** is minimised through **beneficial reuse** or disposal on land.	**Complies with PO21** The dredged material would be stored in a bunded area pending testing and disposal for beneficial reuse.
All dredging and any disposal of dredged material in tidal water	
PO22 Dredging or disposal of **dredged material** in tidal waters does not adversely impact on **coastal processes** and **coastal resources**.	**Complies with PO22** The proposed dredging is in addition to the dredging currently being undertaken and would be limited to maintaining the operation of the ferry. The ferry has been operating since 1962 and dredging has been a common occurrence for a significant period. The dredging required as a result of the upgrade would not adversely impact on coastal processes and coastal resources.
Reclamation	
PO23 Development does not involve **reclamation** of land below **tidal water**, other than for the purposes of: 1. **coastal-dependent development**, **public marine development** or **essential community infrastructure**; or 2. strategic ports, priority ports, boat harbours or strategic airports and aviation facilities, in accordance with a statutory land use plan or master plan; or 3. **coastal protection work** or work necessary to protect **coastal resources** or **coastal processes**.	**Complies with PO23** The proposal does not involve reclamation of land below tidal waters.

Table 8.3: Operational work for tidal works which is not assessed by local government

Performance outcomes	Acceptable outcomes	Response
PO24 Tidal works are sited and designed to operate safely during and following a **defined storm tide event**.	**AO24.1** Tidal work is designed and located in accordance with the Guideline: Building and engineering standards for tidal works, Department of Environment and Heritage Protection, 2017.	**Complies with AO24.1** The proposal is for operational works for upgrade of the existing Daintree River ferry. The works are necessary to provide safe, reliable and efficient Daintree River ferry crossing service. The Ferry has been operating across the Daintree river since 1962 and the operation of the upgraded ferry would continue in accordance with the current operation procedures that include management of storm tide events.

State code 11: Removal, destruction or damage of marine plants

State Development Assessment Provisions guideline - State Code 11: Removal, destruction or damage of marine plants**.** This guideline provides direction on how to address State Code 11 below.

Table 11.1 Operational works

Performance outcomes	Acceptable outcomes	Response
All development - Impacts to marine plants		
PO1 The design, construction and maintenance of the development does not result in adverse impacts to **marine plants** and **fish habitat**.	No acceptable outcome is prescribed.	**Complies with PO1** The proposed ferry upgrade would result in the disturbance of up to 0.4 hectares of marine plants. The works cannot be relocated or avoided; however, the impact has been minimised to the greatest extent possible. This disturbance is proposed to be offset by a financial contribution.
PO2 Development is designed, constructed and maintained to avoid and minimise impacts on **matters of state environmental significance**.	No acceptable outcome is prescribed.	**Complies with PO2** The development has been designed to be generally accommodated within the footprint of the existing ferry and to minimise the additional areas of disturbance. Damage to marine plants would only occur where necessary to facilitate the development.
PO3 Where development impacts on **matters of state environmental significance**, development mitigates impacts and provides an **offset** for	No acceptable outcome is prescribed.	**Complies with PO3**

Performance outcomes	Acceptable outcomes	Response
any acceptable **significant residual impact** on **matters of state environmental significance**. Statutory note: For Brisbane core port land, an offset may only be applied to development on land identified as E1 Conservation/Buffer, E2 Open Space or Buffer/Investigation in the Brisbane Port LUP precinct plan.		It is proposed to provide an offset for the damage to the 0.4 hectares of marine vegetation.
All development in general		
PO4 Aspects of development are only permitted on **tidal land** where there is a functional requirement and the development cannot be feasibly located elsewhere. Ancillary elements (such as rest rooms and offices) are to be located outside of **tidal land**.	No acceptable outcome is prescribed.	**Complies with PO4** The proposal is for the upgrade of the ferry crossing across the Daintree River. It cannot feasibly be located elsewhere. Any ancillary aspect that does not have a functional requirement to be on tidal land has been relocated above tidal land.
PO5 The development does not result in adverse impacts on **fish** movement or fragmentation of **fish habitats**.	No acceptable outcome is prescribed.	**Complies with PO5** The increased footprint of the development occurs immediately adjacent the existing development and no barriers to fish movements are proposed. The development would not restrict fish movement or fragment habitats.
PO6 The design, construction and maintenance of the development does not result in adverse impacts on **fisheries resources.**	No acceptable outcome is prescribed.	**Complies with PO6** The development would largely occur within the footprint of the existing ferry and any additional disturbance would occur immediately adjacent the existing disturbed area. The proposal would not result in adverse impact on fisheries resources.

Performance outcomes	Acceptable outcomes	Response
PO7 The development is designed, constructed and maintained to encourage **fish habitats** and **fisheries resource** values to naturally regenerate.	No acceptable outcome is prescribed.	**Complies with PO7** The ferry ramps on both the northern and southern side of the Daintree River would be rock armoured. This material is complex in structure and allows for the settlement of sessile marine invertebrates and marine plants propagules.
PO8 Development likely to cause drainage or disturbance to acid sulfate soils, prevents the release of contaminants and impacts on **fisheries resources** and **fish habitats**.	No acceptable outcome is prescribed.	**Complies with PO8** The presence of Acid Sulfate Soils is currently monitored on site as part of the existing operation with dredge spoil sampled on a regular basis. To date no PASS has been identified in any of the samples taken. The results of recent soils samples is provided at **Appendix O**. Future construction and operation would be undertaken in accordance with an Acid Sulfate Soils Management Plan.
PO9 The development maintains or restores drainage patterns, the extent and timing of tidal and freshwater inundation.	*For bridges:* **AO9.1** Bridges are designed with abutments above the **highest astronomical tide**. AND *For water, sewer or stormwater infrastructure:* **AO9.2** Infrastructure is placed below the existing natural substrate surface level, and natural substrate, surface levels and habitat condition and values are reinstated. *For any other development, no acceptable outcome is prescribed.*	**Complies with PO9** The proposed development is the upgrade of the existing ferry and at grade infrastructre. It woud not adversley affect existing natural drainage patterns or the timing of tidal and freshwater inundation.

Performance outcomes	Acceptable outcomes	Response
PO10 The design, construction and maintenence of the development maintains natural erosion and accretion processes.	No acceptable outcome is prescribed.	**Complies withPO10** The development has been designed with rock armouring and to be an extension to the existing disturbed area. It would not affect any natural erosion or other tidal processes.
PO11 The development is designed, constructed and maintained so that it does not increase the risk of scour or erosion of **waterway** bed or banks.	No acceptable outcome is prescribed.	**Complies with PO11** The development has been designed with rock armour walls to the infrastructure subject to tidal influence. This design would not increase the risk of bank scour or the erosion of waterway bed or banks.
PO12 The development is designed, constructed and maintained so that it does not increase the risk of shoreline or **foreshore** erosion.	No acceptable outcome is prescribed.	**Not applicable** The development would be located 8.5 kilometres form the foreshore.
PO13 Development does not have an adverse impact on **public use** of or access to **tidal land** and **waterways**.	*For development for a material change of use or reconfiguration of a lot:* **AO13.1 Tidal land** and **fish habitats** are separated from development and are available for **public use**. *For any other development, no acceptable outcome is prescribed.*	**Complies with PO13** The proposed development woud increase public access to the use of tidal land and waterways.
PO14 Development does not adversely impact on community access to **fisheries resources** and **fish habitats** including recreational and indigenous **fishing** access.	**AO14.1** The development does not alter existing infrastructure or existing community access arrangements.	**Complies with AO14.1** The development would improve existing community access arrangements to the Daintree River.

Performance outcomes	Acceptable outcomes	Response
PO15 Development does not adversely impact on commercial **fishing** access and linkages between a commercial **fishery** and infrastructure, services and facilities.	No acceptable outcome is prescribed.	**Complies with Po15** Consistent with the existing ferry operation, the proposed upgraded ferry would not affect commercial fishing access.
Erosion control structures and beach replenishment		
PO16 Removal, destruction or damage to **marine plants** as a result of erosion control structures or beach replenishment only occurs where there is an immediate and significant threat of erosion to: 1. the use of the **land** for its existing or approved purpose; 2. infrastructure, structures or buildings are not expendable or not able to be relocated.	No acceptable outcome is prescribed.	**Not applicable** No erosion control structures or beach replenishment is proposed as part of this application.
PO17 The area that the beach replenishment is to be carried out on is a high-energy, sandy sediment shoreline with biological communities adapted to mobile sediments.	No acceptable outcome is prescribed.	**Not applicable** No erosion control structures or beach replenishment is proposed as part of this application.
PO18 Erosion control structures including beach replenishment does not create terrestrial **land**, unless they form an integral part of the erosion control design.	No acceptable outcome is prescribed.	**Not applicable** No erosion control structures or beach replenishment is proposed as part of this application.
PO19 The beach replenishment work is undertaken in a way that minimises the frequency of any ongoing replenishment requirements.	**AO19.1** Beach replenishment will not require maintenance more often than every two years. AND **AO19.2** A source of replenishment material for future maintenance is identified and secured.	**Not applicable** No erosion control structures or beach replenishment is proposed as part of this application.

Performance outcomes	Acceptable outcomes	Response
PO20 Erosion control structures are located as far landward as possible to reduce adverse impacts to **tidal land** and **marine plants**.	No acceptable outcome is prescribed.	**Not applicable** No erosion control structures or beach replenishment is proposed as part of this application.
Dredging		
PO21 Disposal of dredge spoil does not cause adverse impacts on **marine plants**.	No acceptable outcome is prescribed.	**Complies with PO21** The dredge spoil would be contained within a bunded dredge spoil holding area and tested before being identified for any beneficial community reuse.
Temporary works		
PO22 Temporary works are designed, constructed and maintained to be in place for the shortest possible time or are undertaken for a specified period.	No acceptable outcome is prescribed.	**Complies with PO22** Any temporary works would be removed at the completion of the construction.
PO23 A temporary structure is in place for a specified period and is designed to be completely removed and fish habitat is restored to pre-existing or improved condition on completion.	No acceptable outcome is prescribed.	**Complies with PO23** Any temporary works would be removed at the completion of the construction. Post works monitoring would be undertaken to determine if there is any need to intervene with natural recruitment of marine plants to the site.
Restoration		
PO24 Restoration works do not result in: 1. substitution of **fish habitats**; 2. adverse impacts to the condition of **fish habitats** or **fisheries productivity**.	No acceptable outcome is prescribed.	**Complies with PO24** Any restoration works, if required, would involve the restoration of habitats and not their substitution.

Performance outcomes	Acceptable outcomes	Response
PO25 Marine plants to be used for revegetation purposes have local provenance.	No acceptable outcome is prescribed.	**Complies with PO25** It is anticipated that the rock armour walls would naturally recruit marine plants and natural propagation would occur over time.

State code 22: Environmentally relevant activities

Guideline – SDAP State code 22: Environmentally Relevant Activities provides direction on how to address this code.

Table 22.1: All development

Performance outcomes	Acceptable outcomes	Response
All ERAs		
PO1 Development is suitably located and designed to avoid or mitigate **environmental harm** to the acoustic **environment**.	**AO1.1** Development meets the acoustic quality objectives for sensitive receptors identified in the Environmental Protection (Noise) Policy 2019.	**Complies with AO1.1** The proposal is for the upgrade of the existing Daintree Ferry and would not result in a greater noise impact than the existing operation.
PO2 Development is suitably located and designed to avoid or mitigate **environmental harm** to the air **environment**.	**AO2.1** Development meets the air quality objectives of the Environmental Protection (Air) Policy 2019.	**Complies with AO1.2** The proposal is for the upgrade of the existing Daintree Ferry and would not result in a greater impact on air quality than the existing operation.
PO3 Development (other than **intensive animal industry** for **poultry farming**), is suitably located and designed to avoid or mitigate **environmental harm** on adjacent **sensitive land uses** caused by odour.	No acceptable outcome is prescribed.	**Complies with PO3** The proposal is for the upgrade of the existing Daintree Ferry and would not result in a greater impact on any sensitive land uses.
PO4 Development is suitably located and designed to avoid or mitigate **environmental harm** to the receiving waters **environment**.	**AO4.1** Development meets the management intent, water quality guidelines and objectives of the Environmental Protection (Water and Wetland Biodiversity) Policy 2019.	**Complies with AO4.1** The proposal is for the upgrade of the existing Daintree Ferry and would not result in a greater impact on the receiving waters than the existing operation.

Performance outcomes	Acceptable outcomes	Response
PO5 Development is designed to include elements which: 1. prevent or minimise the production of **hazardous contaminants** and **waste** as by-products; or 2. contain and treat **hazardous contaminants** on-site rather than releasing them into the **environment**; and 3. provide secondary containment to prevent the accidental release of **hazardous contaminants** to the **environment** from spillage or leaks.	No acceptable outcome is prescribed.	**Complies with PO5** The proposed development would be constructed an operate in accordance with an Environmental Management Plan. Refer **Appendix K**. In respect of the dredge spoil this would be contained in a bunded area for testing prior to being identified for beneficial reuse.
PO6 Environmentally hazardous materials located on-site are stored to avoid or minimise their release into the **environment** due to inundation during flood events.	No acceptable outcome is prescribed.	**Complies with PO6** The proposed development would be constructed an operate in accordance with an Environmental Management Plan. Refer to **Appendix K**.
All development – matters of state environmental significance		
PO7 Development is designed and sited to: 1. avoid impacts on **matters of state environmental significance**; or 2. minimise and mitigate impacts on **matters of state environmental significance** after demonstrating avoidance is not reasonably possible; and 3. provide an **offset** if, after demonstrating all reasonable avoidance, minimisation and mitigation measures are undertaken, the development results in an acceptable **significant residual impact** on a **matter of state environmental significance**. Statutory note: For Brisbane core port land, an offset may only be applied to development on land identified as E1 Conservation/Buffer,	No acceptable outcome is prescribed.	**Complies with PO7** The proposed development would have minor impacts on Matters of State Environmental Significance. These impacts have been minimised whilst allowing for the delivery of this critical infrastructure. Where impacts are unavoidable, environmental offsets have been recommended. Refer to the Ecological Assessment and Environmental Management plan provided at **Appendix J and K**, respectively.

Performance outcomes	Acceptable outcomes	Response
E2 Open Space or Buffer/Investigation in the Brisbane Port LUP precinct plan.		
Intensive animal industry – poultry farming (ERA 4(2))		
PO8 Poultry farming development (where farming more than 200,000 birds) is suitably located and designed to avoid or mitigate **environmental harm** on adjacent **sensitive land uses**, caused by odour.	**AO8.1** For poultry farming involving 300,000 birds or less, development meets the separation distances as determined using the S-factor methodology to: 1. a **sensitive land use** in a rural zone; and 2. boundary of a non-rural zone. OR **AO8.2** Development meets the separation distances as determined by odour modelling using the following criteria: 1. 2.5 **odour units**, 99.5 percent, 1 hour average for a **sensitive land use** in a rural zone; or 2. 1.0 **odour units**, 99.5 percent, 1 hour average for the boundary of a non-rural zone.	**Not applicable** Intensive animal husbandry is not proposed a spart if this application.

Appendix N

Planning Scheme Code Responses

6.2.3 Conservation zone code

6.2.3.1 Application

(1) This code applies to assessing development in the Conservation zone.

(2) When using this code, reference should be made to Part 5.

6.2.3.2 Purpose

(1) The purpose of the Conservation zone code is to provide for the protection, restoration and management of areas identified as supporting significant biological diversity and ecological integrity.

(2) The local government purpose of the code is to:

(a) implement the policy direction set in the Strategic Framework, in particular:

(i) Theme 2 : Environmental and landscape values, Element 3.5.2 – Aboriginal cultural heritage values, Element 3.5.3 – Biodiversity, Element 3.5.3 – Coastal zones.

(ii) Theme 3 – Natural resource management, Element 3.6.2 – Land and catchment management.

(iii) Theme 4 – Strong communities and identity, Element 3.7.8 – Strengthening indigenous communities.

(b) conserve and maintain the integrity of biodiversity values, wildlife, habitats and other significant ecological assets and processes over time across public and private lands.

(3) The purpose of the code will be achieved through the following overall outcomes:

(a) Biological diversity, ecological integrity and scenic amenity are protected;

(b) Any recreational or other uses of areas that are in the control of the Crown, or the Council, such as reserves, national parks and the Wet Tropics World Heritage Area or areas adjacent to these areas, are consistent with the management plans of the controlling authority so that conservation and scenic values of these areas are not adversely affected;

(c) Any use of land in private ownership does not affect the environmental, habitat, conservation or scenic values of that land or surrounding area;

(d) Any low intensity facilities based on the appreciation of the natural environment or nature based recreation only establish where there is a demonstrated need and provided they have a minimal impact on the environmental and scenic amenity values of the site or surrounding area.

(e) The provisions of the Return to Country Local Plan facilitate economic and social opportunities on traditional Indigenous lands;

(f) Further lot reconfigurations other than amalgamations, boundary realignments to resolve encroachments, or for the practical needs of essential community infrastructure, or to facilitate Return to Country outcomes do not occur.

Criteria for assessment

Table 6.2.3.1.a – Conservation zone code – assessable development

Performance outcomes	Acceptable outcomes	Applicant response
For self-assessable and assessable development		
PO1 The establishment of uses is consistent with the outcomes sought for the Conservation zone and protects the zone from the intrusion of inconsistent uses.	**AO1** Uses identified in Table 6.2.3.3.b are not established in the Conservation zone.	**Complies with AO1** The proposed development does not involve any of the identified uses.
PO2 The height of buildings is compatible with the character of the area and does not adversely affect the amenity of the area.	**AO2** Buildings and structures are not more than 8.5 metres in height and two storeys. Note - Height is inclusive of roof height.	**Complies with AO2** No buildings are proposed that would exceed 8.5 metres in height.
PO3 Development is setback from site boundaries so they are screened from view from the boundaries of adjoining properties and adjoining roads to maintain the scenic values of the area.	**AO3** Buildings and structures are setback not less than: (a) 40 metres from the frontage of a State- controlled road, existing or proposed arterial road, existing or proposed sub-arterial road, as identified on the Transport network overlay maps contained in Schedule 2; (b) 25 metres from Cape Tribulation Road frontage; (c) 20 metres from any other road frontage (d) 10 metres from side and rear boundaries.	**Complies with AO3** No new buildings are proposed as part of this application.
PO4 The site coverage of all buildings and structures	**AO4** Development is sited in an existing cleared area or an	**Not applicable**

Performance outcomes	Acceptable outcomes	Applicant response
does not have an adverse effect on the conservation or scenic amenity values of the site and surrounding area and buildings are subservient to the natural environment.	area approved for clearing, but which is not yet cleared until a development permit to carry out Building Works is issued. Any clearing is limited to a maximum area of 700m^2 and is sited clear of the high bank of any watercourse. Note – The 700m2 area of clearing does not include an access driveway.	No new buildings or structures are proposed.
PO5 Development is consistent with the overall outcomes sought for the Conservation zone.	**AO5** No acceptable outcomes are prescribed.	**Complies with PO5** The subject site is an area that are is the control of the Crown, or the Council. The sue of the area would be consistent with the management plan of the Council to ensure that conservation and scenic values of the site is not adversely affected.
PO6 Development complements, and is subservient to the surrounding environment and is in keeping with the ecological, landscape and scenic values of the area.	**AO6** The exterior finishes and colours of all development are non-reflective and consist of colours that blend easily with surrounding native vegetation and view-shed.	**Not applicable** No new buildings are proposed.
PO7 Development is screened from view from adjoining roads and properties with a dense screen of endemic/native landscape which: (a) is informal in character and complementary to the existing natural environment; (b) provides screening;	**AO7.1** For any development, the balance area of the site not built upon, including all setback areas must be landscaped/revegetated with dense three tier, endemic planting which is maintained to ensure successful screening is achieved.	**Not applicable** No new buildings are proposed.
	AO7.2	**Not applicable**

Performance outcomes	Acceptable outcomes	Applicant response
(c) enhances the visual appearance of the development. Note – Planning scheme policy – Landscaping provides further guidance on meeting the performance outcome.	Endemic palm species, where used, are planted as informal accent features and not as avenues and not in a regular pattern.	No new planting is proposed.
PO8 Development is complementary to the surrounding environment.	**AO8.1** Development harmonises with the surrounding environment, for example, through suspended, light-weight construction on sloping sites, which requires minimal excavation or fill.	**Not applicable** No new buildings are proposed.
	AO8.2 A driveway or parking areas are constructed and maintained to: (a) minimise erosion, particularly in the wet season; (b) minimise cut and fill; (c) follow the natural contours of the site; (d) minimise vegetation clearing.	**Complies with AO8.2** The parking and road way areas would be maintained by Council and involve limited to no cut and fill.
	AO8.3 Buildings and structures are erected on land not exceeding a maximum gradient of 1 in 6 (16.6%) or On land steeper than 1 in 6 (16.6%) gradient: (a) A split level building form is utilised; (b) A single plane concrete slab is not utilised;	**Not applicable** No new buildings are proposed.

Performance outcomes	Acceptable outcomes	Applicant response
	(c) Any voids between building and ground level, or between outdoor decks and ground level are screened from view using lattice/battens and/or landscaping. and (d) is accompanied by a Geotechnical Report prepared by a qualified engineer at development application stage which includes certification that the site can be stabilised, followed by a certificate upon completion of works.	
	AO8.4 Buildings and structures are sited below any ridgelines and are sited to avoid protrusion above the surrounding tree-level canopy.	**Not applicable** No new buildings are proposed.
PO9 Development is located to: (a) protect the ecological values of the site and surrounding land; (b) maintain the scenic values of the area; (c) maintain appropriate setbacks to waterways, watercourses, wetlands, tidal areas and overland flow paths; (d) avoid areas that are vulnerable to natural hazards; (e) minimise to the greatest extent possible on site excavation and filling;	**AO9** No acceptable outcomes are prescribed.	**Complies with PO9** An ecological assessment of the proposed development has been undertaken, refer to **Appendix J.** The development has been designed to located the development, as far as possible, within the existing footprint of the current activities and limit the additional impacts and to protect and offset any environmental or ecological impacts.

Performance outcomes	Acceptable outcomes	Applicant response
(f) provide buffers to cultural, historical or ecological features; (g) minimise visibility from external sites or public viewing points; (h) minimises to the greatest extent possible the loss of native vegetation and fauna habitat.		
PO10 Development does not result in adverse impacts on: (a) ecological function or features; (b) on-site or surrounding waterways and wetlands.	**AO10** No acceptable outcomes are prescribed.	**Complies with PO10** An ecological assessment of the proposed development has been undertaken, refer to **Appendix J**.
PO11 Rehabilitation of natural processes on disturbed sites is undertaken to improve the environmental integrity of the area.	**AO11** No acceptable outcomes are prescribed	**Not applicable** No rehabilitation of natural processes is required or proposed as a result of or as part of this application.
PO12 Fencing is designed to not impede the free movement of native fauna through the site.	**AO12** No acceptable outcomes are prescribed.	**Not applicable** No fencing is proposed.
PO13 New lots contain a minimum lot size of 200 hectares, unless: (a) the lot reconfiguration results in no additional lots (e.g. amalgamation, boundary	**AO13** No acceptable outcomes are prescribed.	**Not applicable** No new lots would be created.

Performance outcomes	Acceptable outcomes	Applicant response
realignments); (b) the reconfiguration is limited to one additional lot to accommodate an existing or approved: (i). Telecommunications facility; (ii). Utility installation; (c) the lot reconfiguration facilitates and outcome consistent with the Return to Country local plan. Note – Boundary realignments must result in an improved environmental outcome or resolve encroachments.		

Table 6.2.6.3.b - Inconsistent uses within the Low density residential zone

Inconsistent uses		
• Adult store • Agricultural supplies store • Air services • Animal husbandry • Aquaculture • Bar • Brothel • Bulk landscape supplies • Car wash • Caretaker's accommodation • Cemetery • Child care centre • Club • Community care centre • Community residence • Community use • Crematorium • Cropping • Detention facility • Dual occupancy	• Garden centre • Hardware and tradesupplies • High impact industry • Hospital • Hotel • Indoor sport andentertainment • Intensive animal industry • Intensive horticulture • Landing • Low impact industry • Major sport, recreation andentertainment facility • Marine industry • Market • Motor sport facility • Multiple dwelling • Nightclub entertainmentfacility • Office • Outdoor sales • Parking station • Place of worship	• Resort complex • Retirement facility • Roadside stall • Rooming accommodation • Rural activities (unless in accordance with the exceptions nominated in theTable of Assessment for theConservation Zone in Part 5) • Rural workers accommodation • Sales office • Service Station • Shop • Shopping centre • Showroom • Special industry • Substation • Theatre • Tourist attraction • Tourist park • Transport depot • Utility installation

• Dwelling unit • Educational establishment • Extractive industry • Food and drink outlet • Function facility	• Port services • Relocatable home park • Research and technologyindustry • Residential care facility	• Veterinary services • Warehouse • Wholesale nursery • Winery

Note – This table does not imply that all other uses not listed in the table are automatically consistent uses within the zone. Assessable development must still demonstrate consistency through the assessment process.

6.2.10 Rural zone code

6.2.10.1 Application

(1) This code applies to assessing development in the Rural zone.

(2) When using this code, reference should be made to Part 5.

6.2.10.2 Purpose

(1) The purpose of the Rural zone code is to provide for:

- (a) provide for rural uses including cropping, intensive horticulture, intensive animal industries, animal husbandry, animal keeping and other primary production activities;
- (b) provide opportunities for non-rural uses, such as ancillary tourism activities that are compatible with agriculture, the environmental features, and landscape character of the rural area where the uses do not compromise the long-term use of the land for rural purposes;
- (c) protect or manage significant natural resources and processes to maintain the capacity for primary production.

(2) The local government purpose of the code is to:

- (a) implement the policy direction set in the Strategic Framework, in particular:
  - (i) Theme 2 : Environment and landscape values, Element 3.5.5 – Scenic amenity.
  - (ii) Theme 3 : Natural resource management, Element 3.6.2 – Land and catchment management, Element 3.6.3 Primary production, forestry and fisheries, Element 3.6.4 – Resource extraction.
  - (iii) Theme 5 Economy, Element 3.8.2 – Economic growth and diversification, Element 3.8.4 – Primary production.
  - (iv) Theme 6: Infrastructure and transport, Element 3.9.4 – Transport.
- (b) recognise the primacy of rural production, in particular sugar cultivation, and other farming practices in rural areas;
- (c) provide protection to areas of ecological significance and scenic amenity significance where present.

(3) The purpose of the code will be achieved through the following overall outcomes:

- (a) Areas for use for primary production are conserved and fragmentation is avoided.
- (b) Development embraces sustainable land management practices and contributes to the amenity and landscape of the area.
- (c) Adverse impacts of land use, both on-site and on adjoining areas, are avoided and any unavoidable impacts are minimised through location, design, operation and management.
- (d) Areas of remnant and riparian vegetation are retained or rehabilitated.

6.2.10.3 Criteria for assessment

Table 6.2.10.3.a – Rural zone code – assessable development

Performance outcomes	Acceptable outcomes	Applicant response
For self-assessable and assessable development		
PO1 The height of buildings is compatible with the rural character of the area and must not detrimentally impact on visual landscape amenity.	**AO1.1** Dwelling houses are not more than 8.5 metres in height. Note – Height is inclusive of roof height.	**Not applicable** No dwelling houses are proposed.
	AO1.2 Rural farm sheds and other rural structures are not more than 10 metres in height.	**Not applicable** No dwelling houses are proposed.
Setbacks		
PO2 Buildings and structures are setback to maintain the rural character of the area and achieve separation from buildings on adjoining properties.	**AO2** Buildings are setback not less than: (a) 40 metres from the property boundary and a State-controlled road; (b) 25 metres from the property boundary adjoining Cape Tribulation Road; (c) 20 metres from the boundary with any other road; (d) 6 metres from side and rear property boundaries.	**Not applicable** No new buildings or structures are proposed.
PO3 Buildings/structures are designed to maintain the rural character of the area.	**AO3** White and shining metallic finishes are avoided on external surfaces of buildings.	**Not applicable** No new buildings or structures are proposed.

Performance outcomes	Acceptable outcomes	Applicant response
For assessable development		
PO4 The establishment of uses is consistent with the outcomes sought for the Rural zone and protects the zone from the intrusion of inconsistent uses.	**AO4** Uses identified in Table 6.2.10.3.b are not established in the Rural zone.	**Not applicable** No uses are proposed.
PO5 Uses and other development include those that: (a) promote rural activities such as agriculture, rural enterprises and small scale industries that serve rural activities; or (b) promote low impact tourist activities based on the appreciation of the rural character, landscape and rural activities; or (c) are compatible with rural activities.	**AO5** No acceptable outcomes are prescribed.	**Not applicable** No uses are proposed.
PO6 Existing native vegetation along watercourses and in, or adjacent to areas of environmental value, or areas of remnant vegetation of value is protected.	**AO6** No acceptable outcomes are prescribed.	**Complies with PO6** Where possible existing native vegetation is preserved and protected. No vegetation would be removed along the watercourse. A small area of remnant vegetation is required to be removed to accommodate the spoil holding area with the intact area of environmental value protected.
PO7 The minimum lot size is 40 hectares, unless	**AO7** No acceptable outcomes are prescribed.	**Not applicable** No new lots are proposed.

Performance outcomes	Acceptable outcomes	Applicant response
(a) the lot reconfiguration results in no additional lots (e.g. amalgamation, boundary realignments to resolve encroachments); or (b) the reconfiguration is limited to one additional lot to accommodate: (i). Telecommunications facility; (ii). Utility installation.		

Table 6.2.8.3.b - Inconsistent uses within the Medium density residential zone

Inconsistent uses		
• Adult store • Bar • Brothel • Car wash • Child care centre • Club • Community care centre • Community residence • Detention facility, • Dual occupancy • Dwelling unit • Food and drink outlet • Hardware and tradesupplies	• Hotel • Indoor sport and recreation • Low impact industry • Medium impact industry • Multiple dwelling • Nightclub entertainment facility • Non-resident workforce accommodation • Office • Outdoor sales • Parking station • Permanent plantation • Port services • Relocatable home park	• Residential care facility • Resort complex • Retirement facility • Rooming accommodation • Sales office • Service station • Shop • Shopping centre • Short-term accommodation • Showroom • Special industry • Theatre • Warehouse

• Health care services • High impact industry	• Renewable energy facility, being a wind farm	

Note –This table does not imply that all other uses not listed in the table are automatically consistent uses within the zone. Assessable development must still demonstrate consistency through the assessment process.

8.2.1 Acid sulfate soils overlay code

8.2.1.1 Application

(1) This code applies to assessing a material change of use, reconfiguring a lot, operational work or building work within the Acid sulfate soils overlay, if:

(a) self-assessable or assessable development where the code is identified as being applicable in the Assessment criteria for the Overlay Codes contained in the Levels of Assessment Tables in section 5.6;

(b) impact assessable development.

(2) Land in the Acid sulphate soils overlay is identified on the Acid sulfate soils overlay map in Schedule 2 and includes the following sub-categories:

(a) Land at or below the 5m AHD sub-category;

(b) Land above the 5m AHD and below the 20m AHD sub-category.

(3) When using this code, reference should be made to Part 5.

8.2.1.2 Purpose

(1) The purpose of the acid sulfate soils overlay code is to:

(a) implement the policy direction in the Strategic Framework, in particular:

(i) Theme 2: Environment and landscape values, Element 3.5.4 Coastal zones.

(ii) Theme 3: Natural resource management, Element 3.6.2 land and catchment management, Element 3.6.3 Primary production, forestry and fisheries.

(2) enable an assessment of whether development is suitable on land within the Acid sulfate soils overlay sub-categories.

(3) The purpose of the code will be achieved through the following overall outcomes:

(a) Development ensures that the release of any acid and associated metal contaminant is avoided by not disturbing acid sulfate soils when excavating, removing soil or extracting ground water or filling land;

(b) Development ensures that disturbed acid sulfate soils, or drainage waters, are treated and, if required, on-going management practices are adopted that minimise the potential for environmental harm from acid sulfate soil and protect corrodible assets from acid sulfate soil.

Criteria for assessment

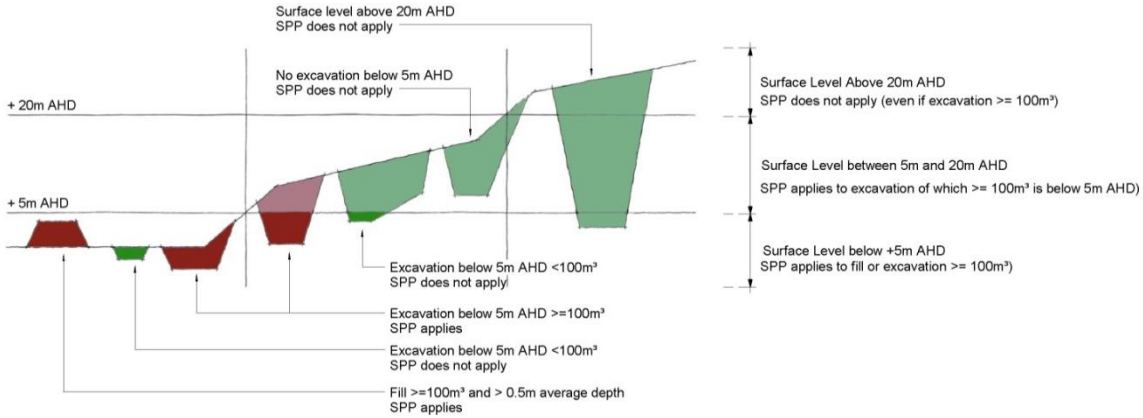
Table 8.2.1.3.a – Acid sulfate soils overlay code – assessable development

Performance outcomes	Acceptable outcomes	Applicant response
For assessable development		
PO1 The extent and location of potential or actual acid sulfate soils is accurately identified.	**AO1.1** No excavation or filling occurs on the site. or **AO1.2** An acid sulfate soils investigation is undertaken. Note - Planning scheme policy SC 6.12– Potential and actual acid sulfate soils provides guidance on preparing an acid sulfate soils investigation.	**Complies with AO1.2** An assessment of the presence of Acid Sulfate Soils has been undertaken for the existing dredge spoil. This has identified that no ASS is present in the existing spoil. Sampling would continue through the operation of the ferry and prior to dredge spoil being put to a beneficial reuse. Refer to **Appendix O** for the results of the recent Acis Sulfate Soil testing.
PO2 Development avoids disturbing potential acid sulfate soils or actual acid sulfate soils, or is managed to avoid or minimise the release of acid and metal contaminants.	**AO2.1** The disturbance of potential acid sulfate soils or actual acid sulfate soils is avoided by: (a) not excavating, or otherwise removing, soil or sediment identified as containing potential or actual acid sulfate soils; (b) not permanently or temporarily extracting groundwater that results in the aeration of previously saturated acid sulfate soils; (c) not undertaking filling that results in: (i) actual acid sulfate soils being moved below the water table; (ii) previously saturated acid sulfate soils	**Complies with AO2.1** An assessment of the presence of Acid Sulfate Soils has been undertaken for the existing dredge spoil. This has identified that no ASS is present in the existing spoil. Sampling would continue through the operation of the ferry and prior to dredge spoil being put to a beneficial reuse. Refer to **Appendix O** for the results of the recent Acis Sulfate Soil testing.

Performance outcomes	Acceptable outcomes	Applicant response
	being aerated. Or **AO2.2** The disturbance of potential acid sulfate soils or actual acid sulfate soils is undertaken in accordance with an acid sulfate soils management plan and avoids the release of metal contaminants by: (a) neutralising existing acidity and preventing the generation of acid and metal contaminants; (b) preventing the release of surface or groundwater flows containing acid and metal contaminants into the environment; (c) preventing the in situ oxidisation of potential acid sulfate soils and actual acid sulfate soils through ground water level management; (d) appropriately treating acid sulfate soils before disposal occurs on or off site; (e) documenting strategies and reporting requirements in an acid sulfate soils environmental management plan. Note - Planning scheme policy SC 6.12 – Acid sulfate soils provides guidance on preparing an acid sulfate soils management plan.	
PO3 No environmental harm is caused as a result of	**AO3**	**Complies with PO3** The potential for acid sulfate soils is possible in

Performance outcomes	Acceptable outcomes	Applicant response
exposure to potential acid sulfate soils or actual acid sulfate soils.	No acceptable outcomes are prescribed.	the dredge spoil. This would be held in a bunded area for testing prior to beneficial reuse or treatment. This would avoid the occurrence of environmental harm.

Figure 8.2.1.3.a – Acid sulfate soils (SPP triggers)



8.2.3 Coastal environment overlay code

8.2.3.1 Application

(1) This code applies to assessing a material change of use, reconfiguring a lot, operational work or building work within the Coastal environment overlay, if:

(a) self assessable or assessable development where the code is identified as being applicable in the Assessment criteria for the Overlay Codes contained in the Levels of Assessment Tables in section 5.6;

(b) impact assessable development.

(2) Land in the Coastal hazard overlay is identified on the Coastal environment overlay map in Schedule 2 and includes the following sub-categories:

(a) Coastal management district sub-category;

(b) Erosion prone area sub-category.

(3) When using this code, reference should be made to Part 5.

8.2.3.2 Purpose

(1) The purpose of the Coastal environment overlay code is to:

(a) implement the policy direction in the Strategic Framework, in particular:

(i) Theme 1 Settlement pattern: Element 3.4.7 Mitigation of hazards;

(ii) Theme 2 Environment and landscape values: Element 3.5.4 Coastal zones;

(iii) Theme 3 Natural resource management: Element 3.6.2 Land and catchment management.

(b) enable an assessment of whether development is suitable on land within the Coastal processes sub-categories.

(2) The purpose of the code will be achieved through the following overall outcomes:

(a) facilitate the protection of both coastal processes and coastal resources;

(b) facilitating coastal dependent development on the foreshore over other development;

(c) public access to the foreshore protects public safety;

(d) maintain the erosion prone area as a development free buffer zone (other than for coastal dependent, temporary or relocatable development);

(e) require redevelopment of existing permanent buildings or structures in an erosion prone area to avoid coastal erosion risks, manage coastal erosion risks through a strategy of planned retreat or mitigate coastal erosion risks;

(f) require development to maintain or enhance natural processes and the protective function of landforms and vegetation that can mitigate risks associated with coastal erosion;

(g) locate and design community infrastructure to maintain the required level of functionality during and immediately after a coastal hazard event.

Criteria for assessment

Table 8.2.3.3.a – Coastal environment overlay code – self-assessable and assessable development

Performance outcomes	Acceptable outcomes	Applicant response
For self-assessable and assessable development		
PO1 No works other than coastal protection works extend seaward of the coastal building line.	**AO1.1** Development (including all buildings and other permanent structures such as swimming pools and retaining walls) does not extend seaward of a coastal building line. Note – Coastal building lines are declared under the Coastal Protection and Management Act 1995 and are administered by the State Department of Environment and Heritage Protection.	**Not applicable** The site does not contain a coastal building line.
	AO1.2 Coastal protection works are only undertaken as a last resort where coastal erosion presents an immediate threat to public safety or existing buildings or structures and the property cannot be relocated or abandoned.	**Not applicable** No coastal protection works are proposed or required.
	AO1.3 Coastal protection works are as far landward as practicable on the lot containing the property to the maximum extent reasonable.	**Not applicable** No coastal protection works are proposed or required.

Performance outcomes	Acceptable outcomes	Applicant response
	AO1.4 Coastal protection work mitigates any increase in the coastal hazard.	**Not applicable** No coastal protection works are proposed or required.
PO2 Where a coastal building line does not exist on a lot fronting the coast or a reserve adjoining the coast, development is setback to maintain the amenity and use of the coastal resource.	**AO2** Where a coastal building line does not exist on a lot fronting the coast or a reserve adjoining the coast, development (including all buildings and structures such as swimming pools) and retaining walls are set back not less than 6 metres from the seaward boundary of the lot.	**Not applicable** No new buildings or structures are proposed.
For assessable development		
Erosion prone areas		
PO3 Development identifies erosion prone areas (coastal hazards).	**AO3** No acceptable outcomes are prescribed.	**Complies with PO3** Erosion prone areas are identified on the relevant state and local government mapping.
PO4 Erosion prone areas are free from development to allow for natural coastal processes.	**AO4.1** Development is not located within the Erosion prone area, unless it can be demonstrated that the development is for: (a) community infrastructure where no suitable alternative location or site exists for this infrastructure; or (b) development that reflects the preferred	**Complies with AO4.1** The development with the erosion prone area is for community infrastructure that cannot be located elsewhere.

Performance outcomes	Acceptable outcomes	Applicant response
	development outcomes in accordance with the zoning of the site (i.e. in the Low density residential zone, a dwelling house is a preferred development outcome in accordance with the zoning of the site)	
	AO4.2 Development involving existing permanent buildings and structures within an erosion prone area does not increase in intensity of its use by: (a) adding additional buildings or structures; or (b) incorporating a land use that will result in an increase in the number of people or employees occupying the site.	**Complies with AO4.2** No additional buildings or structures are proposed.
Coastal management districts		
PO5 Natural processes and protective functions of landforms and vegetation are maintained.	**AO5.1** Development within the coastal management district: (a) maintains vegetation on coastal land forms where its removal or damage may: (i) destabilise the area and increase the potential for coastal erosion, or (ii) interrupt the natural sediment trapping processes or dune or land building processes; (b) maintains sediment volumes of dunes and near-shore coastal landforms, or where a reduction in	**Complies with AO5.1** No vegetation would be removed that would result in the destabilisation of the area or the increase n the potential for coastal erosion.

Performance outcomes	Acceptable outcomes	Applicant response
	sediment volumes cannot be avoided, increased risks to development from coastal erosion are mitigated by location, design and construction and operating standards; (c) minimises the need for erosion control structures or riverine hardening through location, design and construction standards; (d) maintains physical coastal processes outside the development footprint for the development, including longshore transport of sediment along the coast; (e) reduces the risk of shoreline erosion for areas adjacent to the development footprint to the maximum extent feasible in the case of erosion control structures.	
	PO5.2 Where development proposes the construction of an erosion control structure: (a) it is demonstrated that it is the only feasible option for protecting permanent structures from coastal erosion; and (b) those permanent structures cannot be abandoned or relocated in the event of coastal erosion occurring	**Not applicable** No erosion control structures are proposed.
	PO5.3 Development involving reclamation: (a) does not alter, or otherwise minimises impacts	**Not applicable** No reclamation is proposed.

Performance outcomes	Acceptable outcomes	Applicant response
	on, the physical characteristics of a waterway or the seabed near the reclamation, including flow regimes, hydrodynamic forces, tidal water and riverbank stability; (b) is located outside active sediment transport area, or otherwise maintains sediment transport processes as close as possible to their natural state; (c) ensures activities associated with the operation of the development maintain the structure and condition of vegetation communities and avoid wind and water run-off erosion.	
PO6 Development avoids or minimises adverse impacts on coastal resources and their values to the maximum extent reasonable.	**AO6.1** Coastal protection work that is in the form of beach nourishment uses methods of placement suitable for the location that do not interfere with the long-term use of the locality, or natural values within or neighbouring the proposed placement site. and	**Not applicable** Beach nourishment is not proposed as part of this application.
	AO6.2 Marine development is located and designed to expand on or redevelop existing marine infrastructure unless it is demonstrated that it is not practicable to co-locate the development with existing marine infrastructure; and	**Complies with AO6.2** The application is of the upgrade of the existing Daintree Ferry.

Performance outcomes	Acceptable outcomes	Applicant response
	AO6.3 Measures are incorporated as part of siting and design of the development to maintain or enhance water quality to achieve the environmental values and water quality objectives outlined in the Environmental Protection (Water) Policy 2009. and	**Complies with AO6.3** The development has been designed to include bunding of the spoil area and would be constructed and operated in accordance with an Environmental Management Plan, attached at **Appendix K**, to ensure maintenance of water quality.
	AO6.4 Development avoids the disturbance of acid sulfate soils, or where it is demonstrated that this is not possible, the disturbance of acid sulfate soils is carefully managed to minimise and mitigate the adverse effects of disturbance on coastal resources. and	**Complies with AO6.4** Refer to the assessment against eth Acid Sulfate Soils overlay.
	AO6.4 Design and siting of development protects and retains identified ecological values and underlying ecosystem processes within the development site to the greatest extent practicable.	**Complies with Ao6.4** The development ahs been the subject of an Ecological Assessment, refer to **Appendix J.** The assessment contains recommended actions to ensure that the ecosystem processes are protected to the greatest extent possible.
PO7 Development is to maintain access to and along the foreshore for general public access.	**AO7.1** Development provides for regular access points for pedestrians including approved walking tracks, boardwalks and viewing platforms.	**Not applicable** The site is not adjacent the foreshore.

Performance outcomes	Acceptable outcomes	Applicant response
	and	
	AO7.2 Development provides for regular access points for vehicles including approved roads and tracks. or	**Not applicable** The site is not adjacent the foreshore.
	AO7.3 Development demonstrates an alternative solution to achieve an equivalent standard of performance.	**Not applicable** The site is not adjacent the foreshore.
PO8 Public access to the coast is appropriately located, designed and operated.	**AO8.1** Development maintains or enhances public access to the coast. or	**Not applicable** The site is not adjacent the coast.
	AO8.2 Development is located adjacent to state coastal land or tidal water and minimises and offsets any loss of access to and along the foreshore within 500 metres. or	**Complies with AO8.2** The development incorporates improved pedestrian access.
	AO8.3 Development adjacent to state coastal land or tidal water demonstrates an alternative solution to achieve an equivalent standard and quality of access	**Complies with AO8.3** The development incorporates improved pedestrian access.

Performance outcomes	Acceptable outcomes	Applicant response
PO9 Development adjacent to state coastal land or tidal water is located, designed and operated to: (a) maintain existing access to and along the foreshore; (b) minimise any loss of access to and along the foreshore, or (c) offset any loss of access to and along the foreshore by providing for enhanced alternative access in the general location.	**AO9.1** Development adjacent to state coastal land or tidal water: (a) demonstrates that restrictions to public access are necessary for: (i) the safe and secure operation of development; (ii) the maintenance of coastal landforms and coastal habitat; or (b) maintains public access (including public access infrastructure that has been approved by the local government or relevant authority) through the site to the foreshore for: (i) pedestrians via access points including approved walking tracks, boardwalks and viewing platforms; (ii) vehicles via access points including approved roads or tracks.	**Complies with AO9.1** The development incorporates improved pedestrian access.
	AO9.2 Development adjacent to state coastal land or tidal water: (a) is located and designed to: (i) allow safe unimpeded access to, over, under or around built infrastructure located on, over or along the foreshore, for example through the provision of esplanades or easement corridors to	**Complies with AO9.2** The development incorporates improved pedestrian access.

Performance outcomes	Acceptable outcomes	Applicant response
	preserve future access; (ii) ensure emergency vehicles can access the area near the development. or (b) minimises and offsets any loss of access to and along the foreshore within 500m of existing access points and development is located and designed to: (i) allow safe unimpeded access to, over, under or around built infrastructure located on, over or along the foreshore, and (ii) ensure emergency vehicles can access the area near the development.	
AO10 Development that involves reconfiguring a lot for urban purposes adjacent to the coast is designed to ensure public access to the coast in consideration of public access demand from a whole-of-community basis and the maintenance of coastal landforms and coastal habitat.	**AO10.1** Development complies if consideration of public access demand from a whole-of-community basis and the maintenance of coastal landforms and coastal habitat is undertaken. or	**Not applicable** The application does not involve reconfiguring a lot.
	AO10.2 Development demonstrates an alternative solution to achieve an equivalent standard and quality of access.	**Not applicable** The application does not involve reconfiguring a lot.
PO11 Development maintains public access to State	**AO11** Private marine access structures and other structures	**Not applicable**

Performance outcomes	Acceptable outcomes	Applicant response
coastal land by avoiding private marine development attaching to, or extending across, non-tidal State coastal land.	such as decks or boardwalks for private use do not attach to or extend across State coastal land that is situated above high water mark	No private marine structures are proposed.
PO12 Development in connection with an artificial waterway enhances public access to coastal waters.	**AO12** The artificial waterway avoids intersecting with or connection to inundated land or leased land where the passage, use or movement of vessels in water on the land could be restricted or prohibited by the registered proprietor of the inundated land or leased land.	**Not applicable** The application does not involve artificial waterways.
Coastal landscapes, views and vistas		
PO13 Development maintains and / or enhances natural coastal landscapes, views and vistas.	**AO13** No acceptable outcomes are prescribed.	**Complies with PO13** The proposed development would not affect any identified coastal landscapes views or vistas.
PO14 Coastal settlements are consolidated through the concentration of development within the existing urban areas through infill and conserving the natural state of the coastal area outside existing urban areas.	**AO14** No acceptable outcomes are prescribed.	**Not applicable** The development is not relevant to a coastal settlement.
Private marine development		
PO15 Private marine development is to avoid attaching to,	**AO15** Private marine development and other structures such	**Not applicable** The application does not involve private

Performance outcomes	Acceptable outcomes	Applicant response
or extending across, non-tidal State coastal land.	as decks or boardwalks for private use do not attach to, or extend across, State coastal land that is situated above high water mark. Note – For occupation permits or allocations of State land, refer to the *Land Act 1994*.	marine development.
PO16 The location and design of private marine development does not adversely affect the safety of members of the public access to the foreshore.	**AO16** Private marine development does not involve the erection or placement of any physical barrier preventing existing access, along a public access way to the foreshores.	**Not applicable** The application does not involve private marine development.
PO17 Private marine development is of a height and scale and size compatible with the character and amenity of the location.	**AO17** Private marine development has regard to: (a) the height, scale and size of the natural features of the immediate surroundings and locality; (b) the height, scale and size of existing buildings or other structures in the immediate surroundings and the locality; (c) if the relevant planning scheme states that desired height, scale or size of buildings or other structures in the immediate surroundings or locality – the stated desired height, scale or size. Note – The prescribed tidal works code in the *Coastal Protection and Management Regulation 2003* outlines design and construction requirements that must be complied with.	**Not applicable** The application does not involve private marine development.
PO18	**AO18**	**Not applicable**

Performance outcomes	Acceptable outcomes	Applicant response
Private marine development avoids adverse impacts on coastal landforms and coastal processes.	Private marine development does not require the construction of coastal protection works, shoreline or riverbank hardening or dredging for marine access.	The application does not involve private marine development.
For dry land marinas and artificial waterways		
PO19 Dry land marinas and artificial waterways: (a) avoid impacts on coastal resources; (b) do not contribute to the degradation of water quality; (c) do not increase the risk of flooding; (d) do not result in the degradation or loss of MSES; (e) do not result in an adverse change to the tidal prism of the natural waterway to which development is connected. (f) does not involve reclamation of tidal land other than for the purpose of: (i) coastal dependent development, public marine development; or (i) community infrastructure, where there is no feasible alternative; or (iii) strategic ports, boat harbours or strategic airports and aviation facilities in accordance with a statutory land use plan; or	**AO19** No acceptable solutions are prescribed.	**Not applicable** The application does not involve dry land marinas or artificial waterways.

Performance outcomes	Acceptable outcomes	Applicant response
(iv) coastal protection works or works necessary to protect coastal resources and processes.		

8.2.4 Flood and storm tide hazard overlay code

8.2.4.1 Application

(1) This code applies to assessing a material change of use, reconfiguring a lot, operational work or building work within the Flood and storm tide hazard overlay, if:

(a) self assessable or assessable development where the code is identified as being applicable in the Assessment criteria for the Overlay Codes contained in the Levels of Assessment Tables in section 5.6;

(b) impact assessable development.

(2) Land in the Flood and storm tide hazard overlay is identified on the Flood and storm tide hazard overlay map in Schedule 2 and includes the:

(a) Storm tide – high hazard sub-category;

(b) Storm tide – medium hazard sub-category;

(c) Flood plain assessment sub-category;

(d) 100 ARI Mossman, Port Douglas and Daintree Township Flood Studies sub-category.

(3) When using this code, reference should be made to Part 5.

Note - The Flood and storm tide hazards overlay maps contained in Schedule 2 identify areas (Flood and storm tide inundation areas) where flood and storm tide inundation modelling has been undertaken by the Council. Other areas not identified by the Flood and inundation hazards overlay maps contained in Schedule 2 may also be subject to the defined flood event or defined storm tide event.

8.2.4.2 Purpose

(1) The purpose of the Flood and storm tide hazard overlay code is to:

(a) implement the policy direction in the Strategic Framework, in particular:

(i) Theme 1 Settlement pattern: Element 3.4.7 Mitigation of hazards;

(ii) Theme 6 Infrastructure and transport: Element 3.9.2 Energy.

(b) enable an assessment of whether development is suitable on land within the Flood and storm tide hazard sub-categories.

(2) The purpose of the code will be achieved through the following overall outcomes:

(a) development siting, layout and access responds to the risk of the natural hazard and minimises risk to personal safety;

(b) development achieves an acceptable or tolerable risk level, based on a fit for purpose risk assessment;

(c) the development is resilient to natural hazard events by ensuring siting and design accounts for the potential risks of natural hazards to property;

(d) the development supports, and does not unduly burden disaster management response or recovery capacity and capabilities;

(e) the development directly, indirectly and cumulatively avoids an unacceptable increase in severity of the natural hazards and does not significantly increase the potential for damage on site or to other properties;

(f) the development avoids the release of hazardous materials as a result of a natural hazard event;

(g) natural processes and the protective function of landforms and/or vegetation are maintained in natural hazard areas;

(h) community infrastructure is located and designed to maintain the required level of functionality during and immediately after a hazard event.

Criteria for assessment

Table 8.2.4.3.a – Flood and storm tide hazards overlay code –assessable development

Performance outcomes	Acceptable outcomes	Applicant response
For self-assessable and assessable development		
PO1 Development is located and designed to: a) ensure the safety of all persons; b) minimise damage to the development and contents of buildings; c) provide suitable amenity; d) minimise disruption to residents, recovery time, and rebuilding or restoration costs after inundation events. Note – For assessable development within the flood plain assessment sub-category, a flood study by a suitably qualified professional is required to identify compliance with the intent of the acceptable outcome.	**AO1.1** Development is sited on parts of the land that is not within the Flood and Storm tide hazards overlay maps contained in Schedule 2; or For dwelling houses, **AO1.2** Development within the Flood and Storm Tide hazards overlay maps (excluding the Flood plain assessment sub-category) is designed to provide immunity to the Defined Inundation Event as outlined within Table 8.2.4.3.b plus a freeboard of 300mm.	**Not applicable** No new buildings are proposed and the development is for water dependent development.
	AO1.3	**Not applicable**

Performance outcomes	Acceptable outcomes	Applicant response
	New buildings are: (a) not located within the overlay area; (b) located on the highest part of the site to minimise entrance of flood waters; (c) provided with clear and direct pedestrian and vehicle evacuation routes off the site.	No new buildings are proposed.
	AO1.4 In non urban areas, buildings and infrastructure are set back 50 metres from natural riparian corridors to maintain their natural function of reducing velocity of floodwaters.	**Not applicable** No new buildings are proposed.
For assessable development		
PO2 The development is compatible with the level of risk associated with the natural hazard.	**AO2** The following uses are not located in land inundated by the Defined Flood Event (DFE) / Storm tide: (a) Retirement facility; (b) Community care facility; (c) Child care centre.	**Complies with AO2** The proposal does not involve any of the identified uses.
PO3 Development siting and layout responds to flooding potential and maintains personal safety	For Material change of use **AO3.1** New buildings are:	**Not applicable** No new buildings are proposed.

Performance outcomes	Acceptable outcomes	Applicant response
	(a) not located within the overlay area; (b) located on the highest part of the site to minimise entrance of flood waters; (c) provided with clear and direct pedestrian and vehicle evacuation routes off the site. or **AO3.2** The development incorporates an area on site that is at least 300mm above the highest known flood inundation level with sufficient space to accommodate the likely population of the development safely for a relatively short time until flash flooding subsides or people can be evacuated. or **AO3.3** Where involving an extension to an existing dwelling house that is situated below DFE /Storm tide, the maximum size of the extension does not exceed 70m^2 gross floor area. Note – If part of the site is outside the Hazard Overlay area, this is the preferred location of all buildings.	
	For Reconfiguring a lot **AO3.4** Additional lots: (a) are not located in the hazard overlay area;	**Not applicable** Reconfiguring a lot is not proposed.

Performance outcomes	Acceptable outcomes	Applicant response
	or (b) are demonstrated to be above the flood level identified for the site. Note - If part of the site is outside the Hazard Overlay area, this is the preferred location for all lots (excluding park or other open space and recreation lots). Note – Buildings subsequently developed on the lots will need to comply with the relevant building assessment provisions under the *Building Act 1975*.	
	AO3.5 Road and/or pathway layout ensures residents are not physically isolated from adjacent flood free urban areas and provides a safe and clear evacuation route path: (a) by locating entry points into the reconfiguration above the flood level and avoiding culs-de-sac or other non-permeable layouts; and (b) by direct and simple routes to main carriageways.	**Not applicable** The roads would not provide access to new residential premises.
	AO3.6 Signage is provided on site (regardless of whether the land is in public or private ownership) indicating the position and path of all safe evacuation routes off the site and if the site contains, or is within 100m of a floodable waterway, hazard warning signage and depth indicators are also provided at key hazard points, such as at floodway crossings or entrances to	**Complies with AO3.6** The proposed development provides directional signage.

Performance outcomes	Acceptable outcomes	Applicant response
	low-lying reserves. or **AO3.7** There is no intensification of residential uses within the flood affected areas on land situated below the DFE/Storm tide	
	For Material change of use (Residential uses) **AO3.8** The design and layout of buildings used for residential purposes minimise risk from flooding by providing: (a) parking and other low intensive, non-habitable uses at ground level; Note - The high-set 'Queenslander' style house is a resilient low-density housing solution in floodplain areas. Higher density residential development should ensure only non-habitable rooms (e.g. garages, laundries) are located on the ground floor.	**Not applicable** No residential uses are proposed.
PO4 Development is resilient to flood events by ensuring design and built form account for the potential risks of flooding.	For Material change of use (Non-residential uses) **AO4.2** Non residential buildings and structures allow for the flow through of flood waters on the ground floor. Note - Businesses should ensure that they have the necessary contingency plans in place to account for the potential need to relocate property prior to a flood event (e.g. allow enough time to transfer stock to the upstairs level of a building or off site).	**Not applicable** No new buildings are proposed.

Performance outcomes	Acceptable outcomes	Applicant response
	Note - The relevant building assessment provisions under the *Building Act 1975* apply to all building work within the Hazard Area and need to take into account the flood potential within the area.	
	AO4.3 Materials are stored on-site: (a) are those that are readily able to be moved in a flood event; (b) where capable of creating a safety hazard by being shifted by flood waters, are contained in order to minimise movement in times of flood. Notes - (a) Businesses should ensure that they have the necessary contingency plans in place to account for the potential need to relocate property prior to a flood event (e.g. allow enough time to transfer stock to the upstairs level of a building or off site). (b) Queensland Government Fact Sheet 'Repairing your House after a Flood' provides information about water resilient products and building techniques.	**Complies with AO4.3** Any material stored on site would be able to be moved in the event of a flood event.
PO5 Development directly, indirectly and cumulatively avoids any increase in water flow velocity or flood level and does not increase the potential flood damage either on site or on other properties. Note – Berms and mounds are considered to be an	For Operational works **AO5.1** Works in urban areas associated with the proposed development do not involve: (a) any physical alteration to a watercourse or floodway including vegetation clearing; or (b) a net increase in filling (including berms and	**Not applicable** The site is not within an urban area.

Performance outcomes	Acceptable outcomes	Applicant response
undesirable built form outcome and are not supported.	mounds).	
	AO5.2 Works (including buildings and earthworks) in non urban areas either: (a) do not involve a net increase in filling greater than 50m^3; or (b) do not result in any reductions of on-site flood storage capacity and contain within the subject site any changes to depth/duration/velocity of flood waters; or (c) do not change flood characteristics outside the subject site in ways that result in: (i) loss of flood storage; (ii) loss of/changes to flow paths; (iii) acceleration or retardation of flows or any reduction in flood warning times elsewhere on the flood plain.	**Complies with AO5.2** The proposed works would not result in a reduction of on-site flood storage capacity.
	For Material change of use **AO5.3** Where development is located in an area affected by DFE/Storm tide, a hydraulic and hydrology report, prepared by a suitably qualified professional, demonstrates that the development maintains the flood storage capacity on the	**Not applicable** The material change of use relates to dredging within a waterway.

Performance outcomes	Acceptable outcomes	Applicant response
	subject site; and (a) does not increase the volume, velocity, concentration of flow path alignment of stormwater flow across sites upstream, downstream or in the general vicinity of the subject site; and (b) does not increase ponding on sites upstream, downstream or in the general vicinity of the subject site.	
	For Material change of use and Reconfiguring a lot **AO5.4** In non urban areas, buildings and infrastructure are set back 50 metres from natural riparian corridors to maintain their natural function of reducing velocity of floodwaters. Note – Fences and irrigation infrastructure (e.g. irrigation tape) in rural areas should be managed to minimise adverse the impacts that they may have on downstream properties in the event of a flood.	**Not applicable** No new buildings are proposed.
PO6 Development avoids the release of hazardous materials into floodwaters.	For Material change of use **AO6.1** Materials manufactured or stored on site are not hazardous or noxious, or comprise materials that may cause a detrimental effect on the environment if discharged in a flood event; or	**Not applicable** No hazardous material storage would occur on site.

Performance outcomes	Acceptable outcomes	Applicant response
	AO6.2 If a DFE level is adopted, structures used for the manufacture or storage of hazardous materials are: (a) located above the DFE level; or (b) designed to prevent the intrusion of floodwaters.	
	AO6.3 Infrastructure is designed and constructed to resist hydrostatic and hydrodynamic forces as a result of inundation by the DFE.	**Complies with AO6.3** All infrastructure would be designed to withstand hydrodynamic forces.
	AO6.4 If a flood level is not adopted, hazardous materials and their manufacturing equipment are located on the highest part of the site to enhance flood immunity and designed to prevent the intrusion of floodwaters. Note – Refer to *Work Health and Safety Act 2011* and associated Regulation and Guidelines, the *Environmental Protection Act 1994* and the relevant building assessment provisions under the *Building Act 1975* for requirements related to the manufacture and storage of hazardous materials.	**Not applicable** No hazardous material storage would occur on site.
PO7 The development supports, and does not unduly burden, disaster management response or	**AO7** Development does not:	**Complies with PO7** The development would nit increase the number of people at risk of flooding, increase the

Performance outcomes	Acceptable outcomes	Applicant response
recovery capacity and capabilities.	(a) increase the number of people calculated to be at risk of flooding; (b) increase the number of people likely to need evacuation; (c) shorten flood warning times; and (d) impact on the ability of traffic to use evacuation routes, or unreasonably increase traffic volumes on evacuation routes.	number of people requiring evacuation or affect evacuation routes.
PO8 Development involving community infrastructure: (a) remains functional to serve community need during and immediately after a flood event; is designed, sited and operated to avoid adverse impacts on the community or environment due to impacts of flooding on infrastructure, facilities or access and egress routes; retains essential site access during a flood event; is able to remain functional even when other infrastructure or services may be compromised in a flood event.	**AO8.1** The following uses are not located on land inundated during a DFE/Storm tide: (a) community residence; and (b) emergency services; and (c) residential care facility; and (d) utility installations involving water and sewerage treatment plants; and (e) storage of valuable records or items of historic or cultural significance (e.g. archives, museums, galleries, libraries). or **AO8.2** The following uses are not located on land inundated during a 1% AEP flood event: (a) community and cultural facilities, including facilities where an education and care	**Complies with AO8.1** None of the identified uses are proposed.

Performance outcomes	Acceptable outcomes	Applicant response
	service under the Education and care Services National law (Queensland) is operated or child care service under the *Child Care Act 2002* is conducted, (b) community centres; (c) meeting halls; (d) galleries; (e) libraries. The following uses are not located on land inundated during a 0.5% AEP flood event. (a) emergency shelters; (b) police facilities; (c) sub stations; (d) water treatment plant The following uses are not located on land inundated during a 0.2% AEP flood event: (a) correctional facilities; (b) emergency services; (c) power stations; (d) major switch yards. and/or **AO8.3** The following uses have direct access to low hazard evacuation routes as defined in Table **8.2.4.3.c** :	

Performance outcomes	Acceptable outcomes	Applicant response
	(a) community residence; and (b) emergency services; and (c) hospitals; and (d) residential care facility; and (e) sub stations; and (f) utility installations involving water and sewerage treatment plants.	
	AO8.4 Any components of infrastructure that are likely to fail to function or may result in contamination when inundated by flood, such as electrical switch gear and motors, telecommunications connections, or water supply pipeline air valves are: (a) located above DFE/Storm tide or the highest known flood level for the site; (b) designed and constructed to exclude floodwater intrusion / infiltration.	**Complies with AO8.4** The application is for the upgrade of the Daintree Ferry and would be designed accordingly.
	AO8.5 Infrastructure is designed and constructed to resist hydrostatic and hydrodynamic forces as a result of inundation by a flood.	**Complies with AO8.5** The application is for the upgrade of the Daintree Ferry and would be designed accordingly.

Table 8.2.4.3.b - Minimum immunity (floor levels) for development

Minimum immunity to be achieved (floor levels)	Uses and elements of activities acceptable in the event
20% AEP level	• Parks and open space.
5% AEP level	• Car parking facilities (including car parking associated with use of land).
1% AEP level	• All development (where not otherwise requiring an alternative level of minimum immunity).
0.5% AEP level	• Emergency services (if for a police station); • Industry activities (if including components which store, treat or use hazardous materials); • Substation; • Utility installation.
0.2% AEP level	• Emergency services; • Hospital; • Major electricity infrastructure; • Special industry.

Table 8.2.4.3.c - Degree of flood

Criteria	Low	Medium	High	Extreme
Wading ability	If necessary children and the elderly could wade. (Generally, safe wading velocity depth product is less than 0.25)	Fit adults can wade. (Generally, safe wading velocity depth product is less than 0.4)	Fit adults would have difficulty wading. (Generally, safe wading velocity depth product is less than 0.6)	Wading is not an option.
Evacuation distances	< 200 metres	200-400 metres	400-600 metres	600 metres
Maximum flood depths	< 0.3 metre	< 0.6 metre	< 1.2 metres	1.2 metres
Maximum flood velocity	< 0.4 metres per second	< 0.8 metres per second	< 1.5 metres per second	1.5 metres per second
Typical means of egress	Sedan	Sedan early, but 4WD or trucks later	4WD or trucks only in early stages, boats or helicopters	Large trucks, boats or helicopters
Timing Note: This category cannot be implemented until evacuation times have been established in the Counter Disaster Plan (Flooding)	Ample flood forecasting. Warning and evacuation routes remain passable for twice as long as evacuation time.	Evacuation routes remain trafficable for 1.5 times as long as the evacuation.	Evacuation routes remain trafficable for only up to minimum evacuation time.	There is insufficient evacuation time.

Note: The evacuation times for various facilities or areas would (but not necessarily) be included in the Counter Disaster Plan.

Generally safe wading conditions assume even walking surfaces and no obstructions, steps, soft underfoot etc.

8.2.7 Natural areas overlay code

8.2.7.1 Application

(1) This code applies to assessing a material change of use, reconfiguring a lot, operational work or building work within the Natural areas overlay, if:

(a) self-assessable or assessable development where the code is identified as being applicable in the Assessment criteria for the Overlay Codes contained in the Levels of Assessment Tables in section 5.6;

(b) impact assessable development.

(2) Land in the Natural areas overlay is identified on the Natural areas overlay map in Schedule 2 and includes the following sub-categories:

(a) MSES – Protected area;

(b) MSES – Marine park;

(c) MSES – Wildlife habitat;

(d) MSES – Regulated vegetation;

(e) MSES – Regulated vegetation (intersecting a Watercourse);

(f) MSES – High ecological significance wetlands;

(g) MSES – High ecological value waters (wetlands);

(h) MSES – High ecological value waters (watercourse);

(i) MSES – Legally secured off set area.

Note – MSES = Matters of State Environmental Significance.

(3) When using this code, reference should be made to Part 5.

8.2.7.2 Purpose

(1) The purpose of the Natural areas overlay code is to:

(a) implement the policy direction in the Strategic Framework, in particular:

(i) Theme 2: Environment and landscape values, Element 3.5.3 Biodiversity, Element 3.5.4 Coastal zones;

(ii) Theme 3: Natural resource management Element 3.6.2 Land and catchment management, Element 3.6.3 Primary production, forestry and fisheries.

(b) enable an assessment of whether development is suitable on land within the Biodiversity area overlay sub-categories.

(2) The purpose of the code will be achieved through the following overall outcomes:

(a) development is avoided within:

(i) areas containing matters of state environmental significance (MSES);

(ii) other natural areas;

(iii) wetlands and wetland buffers;

(iv) waterways and waterway corridors.

(b) where development cannot be avoided, development:

(i) protects and enhances areas containing matters of state environmental significance;

(ii) provides appropriate buffers;

(iii) protects the known populations and supporting habitat of rare and threatened flora and fauna species, as listed in the relevant State and Commonwealth legislation;

(iv) ensures that adverse direct or indirect impacts on areas of environmental significance are minimised through design, siting, operation, management and mitigation measures;

(v) does not cause adverse impacts on the integrity and quality of water in upstream or downstream catchments, including the Great Barrier Reef World Heritage Area;

(vi) protects and maintains ecological and hydrological functions of wetlands, waterways and waterway corridors;

(vii) enhances connectivity across barriers for aquatic species and habitats;

(viii) rehabilitates degraded areas to provide improved habitat condition, connectivity, function and extent;

(ix) protects areas of environmental significance from weeds, pests and invasive species.

(c) strategic rehabilitation is directed to areas on or off site, where it is possible to achieve expanded habitats and increased connectivity.

Criteria for assessment

Table 8.2.7.3.a - Natural areas overlay code – assessable development

Performance outcomes	Acceptable outcomes	Applicant response
For self-assessable and assessable development		

Performance outcomes	Acceptable outcomes	Applicant response
Protection of matters of environmental significance		
PO1 Development protects matters of environmental significance.	**AO1.1** Development avoids significant impact on the relevant environmental values. or	**Complies with AO1.1** The impact of the ferry upgrade has been the subject of an Ecological Assessment, attached at **Appendix J**. The assessment concluded that the development would not have a significant impact on the matters of environmental significance.
	AO1.2 A report is prepared by an appropriately qualified person demonstrating to the satisfaction of the assessment manager, that the development site does not contain any matters of state and local environmental significance. or	**Complies with AO1.1**
	AO1.3 Development is located, designed and operated to mitigate significant impacts on environmental values. For example, a report certified by an appropriately qualified person demonstrating to the satisfaction of the assessment manager, how the proposed development mitigates impacts, including on water quality, hydrology and biological processes.	**Complies with AO1.1**
Management of impacts on matters of environmental significance		

Performance outcomes	Acceptable outcomes	Applicant response
PO2 Development is located, designed and constructed to avoid significant impacts on matters of environmental significance.	**AO2** The design and layout of development minimises adverse impacts on ecologically important areas by: (a) focusing development in cleared areas to protect existing habitat; (b) utilising design to consolidate density and preserve existing habitat and native vegetation; (c) aligning new property boundaries to maintain ecologically important areas; (d) ensuring that alterations to natural landforms, hydrology and drainage patterns on the development site do not negatively affect ecologically important areas; (e) ensuring that significant fauna habitats are protected in their environmental context; and (f) incorporating measures that allow for the safe movement of fauna through the site.	**Complies with AO2** The Ecological Assessment, provided at **Appendix J**, concluded that: • The development would not have a significant impact on threatened species in the area; • That any vegetation clearance would occur in an area of marginal habitat and that there would be no significant impact on migratory species; • The proposal would align with existing cleared areas and vegetation removal would be limited to disturbed vegetation.
PO3 An adequate buffer to areas of state environmental significance is provided and maintained.	**AO3.1** A buffer for an area of state environmental significance (Wetland protection area) has a minimum width of: (a) 100 metres where the area is located outside Urban areas; or (b) 50 metres where the area is located within Urban areas. or	**Not applicable** No assessable development would occur within 100 metres of the wetland protection area located on the north side of the Daintree River.

Performance outcomes	Acceptable outcomes	Applicant response
	AO3.2 A buffer for an area of state environmental significance is applied and maintained, the width of which is supported by an evaluation of environmental values, including the function and threats to matters of environmental significance.	**Not applicable** No assessable development would occur within 100 metres of the wetland protection area located on the north side of the Daintree River.
PO4 Wetland and wetland buffer areas are maintained, protected and restored. Note – Wetland buffer areas are identified in AO3.1.	**AO4.1** Native vegetation within wetlands and wetland buffer areas is retained.	**Not applicable** No assessable development would occur within 100 metres of the wetland protection area located on the north side of the Daintree River.
	AO4.2 Degraded sections of wetlands and wetland buffer areas are revegetated with endemic native plants in patterns and densities which emulate the relevant regional ecosystem.	**Not applicable** No assessable development would occur within 100 metres of the wetland protection area located on the north side of the Daintree River.
PO5 Development avoids the introduction of non-native pest species (plant or animal), that pose a risk to ecological integrity.	**AO5.1** Development avoids the introduction of non-native pest species.	**Complies with AO5.1** It is not proposed to undertake any landscaping as part of this application. A weed management plan may be conditioned as part of a development approval.
	AO5.2 The threat of existing pest species is controlled by	**Complies with AO5.2** The site is not identified as containing and

Performance outcomes	Acceptable outcomes	Applicant response
	adopting pest management practices for long-term ecological integrity.	pest species. A weed management plan may be conditioned as part of a development approval.
Ecological connectivity		
PO6 Development protects and enhances ecological connectivity and/or habitat extent.	**AO6.1** Development retains native vegetation in areas large enough to maintain ecological values, functions and processes. and	**Complies withAo6.1** The design of the development results in clearing only within previously cleared non-remnant vegetation and adjacent to existing road and urban infrastructure. As a result, the regional ecosystem will remain within the landscape despite the clearance of vegetation (threatening process). Refer to the Ecological Assessment, provided at **Appendix J.**
	AO6.2 Development within an ecological corridor rehabilitates native vegetation. and	**Not applicable** No clearing would occur within an ecological corridor.
	AO6.3 Development within a conservation corridor mitigates adverse impacts on native fauna, feeding, nesting, breeding and roosting sites and native fauna movements.	**Not applicable** No clearing would occur within an ecological corridor.

Performance outcomes	Acceptable outcomes	Applicant response
PO7 Development minimises disturbance to matters of state environmental significance (including existing ecological corridors).	**AO7.1** Development avoids shading of vegetation by setting back buildings by a distance equivalent to the height of the native vegetation. and	**Not applicable** No buildings are proposed as part of this application.
	AO7.2 Development does not encroach within 10 metres of existing riparian vegetation and watercourses.	**Not applicable** The application is for the upgrade of a river ferry. It must be located on the water.
Waterways in an urban area		
PO8 Development is set back from waterways to protect and maintain: (a) water quality; (b) hydrological functions; (c) ecological processes; (d) biodiversity values; (e) riparian and in-stream habitat values and connectivity; (f) in-stream migration	**AO8.1** Where a waterway is contained within an easement or a reserve required for that purpose, development does not occur within the easement or reserve; or	**Not applicable** The site is not in an urban area.
	AO8.2 Development does not occur on the part of the site affected by the waterway corridor. Note – Waterway corridors are identified within Table 8.2.7.3.b.	**Not applicable** The site is not in an urban area.
Waterways in a non-urban area		

Performance outcomes	Acceptable outcomes	Applicant response
PO9 Development is set back from waterways to protect and maintain: (a) water quality; (b) hydrological functions; (c) ecological processes; (d) biodiversity values; (e) riparian and in-stream habitat values and connectivity; (f) in-stream migration.	**AO9** Development does not occur on that part of the site affected by a waterway corridor. Note – Waterway corridors are identified within Table 8.2.7.3.b.	**Not applicable** The development is required to occur within a waterway corridor to function.

Table 8.2.7.3.b — Widths of waterway corridors for waterways

Waterways classification	Waterway corridor width
Waterways in Urban areas	10 metres measured perpendicular from the top of the high bank.
Waterways in Other areas	For a dwelling house, 10 metres measured perpendicular from the top of the high bank. For all other development, 20 metres measured perpendicular from the top of the high bank.

8.2.8 Places of significance overlay code

8.2.8.1 Application

(1) This code applies to assessing a material change of use, reconfiguring a lot, operational work or building work within the Places of significance overlay; if

(a) self-assessable or assessable development where the code is identified as being applicable in the Assessment criteria for the Overlay Codes contained in the Levels of Assessment Tables in section 5.6;

(b) impact assessable development.

(2) Land in the Places of significance overlay is identified on the Places of significance overlay maps in Schedule 2 and includes the following sub-categories:

(a) Places of local significance sub-category;

(b) State heritage places sub-category;

(c) Premises adjoining a state heritage place sub-category.

Note - The places of significance overlay code does not apply to indigenous cultural heritage which is protected under the Aboriginal Cultural Heritage Act 2003

Note - Development on a state heritage place is regulated by the Queensland Heritage Act 1992. Development on premises adjoining a state heritage place is regulated by the Places of significance overlay code.

(3) When using this code, reference should be made to Part 5.

8.2.8.2 Purpose

(1) The purpose of the Places of significance overlay code is to:

(a) implement the policy direction of the Strategic Framework, in particular:

(i) Theme 4: Strong communities and identity Element 3.7.7 Cultural and landscape heritage.

(b) enable an assessment of whether development is suitable on land within the Places of significance overlay.

(2) The purpose of the code will be achieved through the following overall outcomes:

(a) to ensure places of local significance are conserved and development is compatible with the cultural significance of the place. Development on premises adjoining a state heritage place protects the cultural significance of the place and its setting;

(b) development does not result in the demolition or removal of a place of local significance, unless there is no prudent and feasible alternative to the demolition or removal;

Note - In considering whether there is no prudent and feasible alternative to the demolition or removal of a place of local significance, the Council will have regard to:

(i) safety, health, structural and economic considerations;

(ii) any other matters the Council considers relevant.

(c) development is compatible with the cultural significance of the place of local significance;

(d) the adaptive reuse of a place of local significance is encouraged so that the cultural significance is retained;

(e) the fabric and setting of a place of local significance is conserved and any changes are managed, documented and interpreted;

(f) development does not have a detrimental impact on archaeological values;

(g) development on premises adjoining a state heritage place is sympathetic to the cultural significance and setting of the state heritage place.

Criteria for assessment

Table 8.2.2.3.a – Places of significance overlay code–assessable development

Performance outcomes	Acceptable outcomes	Applicant response
For self-assessable and assessable development		
Demolition or removal of a place of local significance		
PO1 Development does not result in the demolition or removal of a place of local significance. Note - Guidance on meeting the performance outcome is provided within Planning scheme policy SC6.11 – Places of significance.	**AO1** No acceptable outcomes are prescribed.	**Complies with PO1** It is not proposed to demolish a place of significance as part of this application.
PO2 Development is compatible with the conservation and management of the cultural significance of the place.	**AO2** No acceptable outcomes are prescribed.	**Complies with PO2** The place of significance would be retained as part of this application.

Performance outcomes	Acceptable outcomes	Applicant response
Note - Guidance on meeting the performance outcome is provided within Planning scheme policy SC6.11 – Places of significance.		
PO3 Development conserves the features and values of a place of local significance that contribute to its cultural significance.	**AO3** Development does not alter, remove or conceal significant features of a place of local significance.	**Complies with AO3** The “Ferry House” would be retained and unaffected by the proposed development.
PO4 Changes to a place of local significance are appropriately managed, documented and interpreted. Note - Guidance on meeting the performance outcome is provided within Planning scheme policy SC6.11 – Places of significance.	**AO4.1** Development is compatible with a conservation management plan prepared in accordance with the Australia ICOMOS Charter for Places of Cultural Heritage Significance.	**Not applicable** No changes are proposed to the place of significance.
	AO4.2 An archival record is prepared to document the changes.	**Not applicable** No changes are proposed to the place of significance.
	AO4.3 Development includes interpretation that explains the cultural significance of the place and the changes.	**Not applicable** No changes are proposed to the place of significance.
PO5 Development does not adversely affect the character, setting or appearance of the place of local significance, including removal of vegetation	**AO5.1** The scale, location and design of the development are compatible with the character, setting and appearance of the place of local significance.	**Complies with AO5.1** The continued operation of the Daintree Ferry is consistent with the “Ferry House”.

Performance outcomes	Acceptable outcomes	Applicant response
that contributes to the cultural heritage significance of the place.	**AO5.2** The development is unobtrusive and cannot readily be seen from surrounding streets or other public places.	**Not applicable**
	AO5.3 Existing vegetation that forms part of the place is retained and incorporated into the design and layout of development.	**Complies with AO5.3** No vegetation would be removed from the curtilage of the Ferry House.
PO6 Excavation or other earthworks do not have a detrimental impact on archaeological values. Note - Guidance on meeting the performance criteria is provided within Planning scheme policy SC6.11 – Places of significance.	**AO6.1** The impact of excavation is minor and limited to parts of the place of local significance that have been disturbed by previous excavation.	**Not applicable** No changes are proposed to the place of significance.
	AO6.2 An archaeological management plan is prepared for development involving subsurface disturbance.	**Not applicable** No changes are proposed to the place of significance.
Advertising devices		
PO7 Advertising devices located on, or on premises adjoining a state heritage place are sited and designed so as to: (a) be compatible with the cultural significance of the state heritage place or place of local significance;	**AO7** No acceptable outcomes are prescribed.	**Not applicable** No advertising devices are proposed.

Performance outcomes	Acceptable outcomes	Applicant response
(b) not obscure the appearance or prominence of the state heritage place or place of local significance when viewed from the street or other public places; (c) not alter or conceal significant features of the state heritage place, or place of local significance.		
Development on premises adjoining a state heritage place		
PO8 Where on a premises adjoining a state heritage place or place of local significance, development is designed and constructed so as to: (a) not to obscure the appearance or prominence of the state heritage place from surrounding streets or public places; (b) not to intrude into important vistas of the state heritage place; (c) not to place buildings and structures between a state heritage place and its primary or secondary street frontage; (d) to ensure new buildings or structures are setback from the street frontage and are of a height, bulk and scale which retains the visual prominence and values of the state heritage place; (e) to minimise disturbance to the original fabric of the state heritage place;	**AO8** No acceptable outcomes are prescribed.	**Not applicable** The site doe not contain and is not adjacent a state heritage place.

Performance outcomes	Acceptable outcomes	Applicant response
(f) to retain, where intact, the significant or original siting and context of the state heritage place. Note - Guidance on meeting the performance criteria is provided within Planning scheme policy SC6.11 – Places of significance.		

8.2.10 Transport network overlay code

8.2.10.1 Application

(1) This code applies to assessing a material change of use, reconfiguring a lot, operational work or building work within the Transport network overlay; if:

(a) self-assessable or assessable development where the code is identified as being applicable in the Assessment criteria for the Overlay Codes contained in the Levels of Assessment Tables in section 5.6;

(b) impact assessable development.

(2) Land within the Transport network overlay is identified on the Transport network (Road Hierarchy) overlay map and the Transport network (Pedestrian and Cycle) overlay map in Schedule 2 and includes the following sub-categories:

(a) Transport network (Road Hierarchy) overlay sub-categories:

i. State controlled road sub-category;

ii. Sub-arterial road sub-category;

iii. Collector road sub-category;

iv. Access road sub-category;

v. Industrial road sub-category;

vi. Major rural road sub-category;

vii. Minor rural road sub-category;

viii. Unformed road sub-category;

ix. Major transport corridor buffer area sub-category.

(b) Transport network (Pedestrian and Cycle) overlay sub-categories:

i. Principal route;

ii. Future principal route;

iii. District route;

iv. Neighbourhood route;

v. Strategic investigation route.

(3) When using this code, reference should be made to Part 5.

8.2.10.2 Purpose

(1) The purpose of the Transport network overlay code is to:

(a) implement the policy direction of the Strategic Framework, in particular:

i. Theme 1: Settlement pattern Element 3.4.2 Urban settlement, Element 3.4.3 Activity centres;

ii. Theme 6: Infrastructure and transport Element 3.9.4 Transport;

(b) enable an assessment of whether development is suitable on land within the Transportnetwork overlay.

(2) The purpose of the code will be achieved through the following overall outcomes:

(a) development provides for transport infrastructure (including active transport infrastructure);

(b) development contributes to a safe and efficient transport network;

(c) development supports the existing and future role and function of the transport network;

(d) development does not compromise the safety and efficiency of major transport infrastructure and facilities.

8.2.10.3 Criteria for assessment

Table 8.2.10.3.a – Transport network overlay code – assessable development

Performance outcomes	Acceptable outcome	Applicant response
For assessable development		
PO1 Development supports the road hierarchy for the region. Note -A Traffic impact assessment report prepared in accordance with Planning scheme policy SC6.10 - Parkingand access is one way to demonstrate achievement of the Performance Outcomes.	**AO1.1** Development is compatible with the intended role and function of the transport network as identified on the Transport network overlay maps containedin Schedule 2.	**Complies with AO1.1** The upgrade of the Daintree Ferry is consistent with the intended role of Cape Tribulation Road.
	AO1.2 Development does not compromise the safety and efficiency of the transport network.	**Complies with AO1.2** The development would improve the safety and efficiency of the road network.
	AO1.3	**Not applicable**

Performance outcomes	Acceptable outcome	Applicant response
	Development is designed to provide access via the lowest order road, where legal and practicable access can be provided to that road	Access can only be from Cape Tribulation Road.
PO2 Transport infrastructure is provided in anintegrated and timely manner. Note - A Traffic impact assessment report prepared in accordance with Planning scheme policy SC6.10 – Parking and access is one way to demonstrate achievement of the Performance Outcomes.	**AO2** Development provides infrastructure (including improvements to existing infrastructure) in accordance with: (a) the Transport network overlay maps contained in Schedule 2; (b) any relevant Local Plan. Note – The Translink Public Transport Infrastructure Manual provides guidance on the design of public transport facilities.	**Complies with AO2** The development is for infrastructure.
PO3 Development involving sensitive land uses within a major transport corridor buffer area is located, designed and maintained to avoid or mitigate adverse impacts on amenity for the sensitive land use.	**AO3** No acceptable outcomes are prescribed. Note – Part 4.4 of the Queensland Development Code provides requirements for residential building design in a designated transport noise corridor.	**Not applicable** The development does not involve sensitive land uses.
PO4 Development does not compromise the intended role and function or safety and efficiency of major transport corridors. Note - A Traffic impact assessment report prepared in accordance with Planning scheme policy SC6.10 - Parkingand access is one way to demonstrate achievement of the Performance Outcomes.	**AO4.1** Development is compatible with the role and function (including the future role and function) of major transport corridors.	**Complies with AO4.1** The upgrade of the Daintree Ferry is consistent with the intended role of Cape Tribulation Road.
	AO4.2 Direct access is not provided to a major transport corridor where legal and practical access from another road is available.	**Not applicable** Access can only be from Cape Tribulation Road.

Performance outcomes	Acceptable outcome	Applicant response
	AO4.3 Intersection and access points associated with major transport corridors are located in accordance with: (a) the Transport network overlay maps contained in Schedule 2; and (b) any relevant Local Plan.	**Not applicable** No new intersections or access points are proposed.
	AO4.4 The layout of development and the design of the associated access is compatible with existing and future boundaries of the major transport corridor or major transport facility.	**Not applicable** No new intersections or access points are proposed.
PO5 Development retains and enhances existing vegetation between a development and a major transport corridor, so as to provide screening to potential noise, dust, odour and visual impacts emanating from the corridor.	**AO5** No acceptable outcomes are prescribed.	**Not applicable** The site is not located in a major transport corridor buffer area.
Pedestrian and cycle network		
PO6 Lot reconfiguration assists in the implementation of the pedestrian and cycle movement network to achieve safe, attractive and efficient pedestrian and cycle networks.	**AO6.1** Where a lot is subject to, or adjacent to an element of the pedestrian and cycle Movement network (identified on the Transport network overlay maps contained in Schedule 2) the specific location of this element of the pedestrian and cycle network is incorporated in the design ofthe lot layout.	**Not applicable** No new lots are proposed.

Performance outcomes	Acceptable outcome	Applicant response
	AO6.2 The element of the pedestrian and cycle networkis constructed in accordance with the Design Guidelines set out in Sections D4 and D5 of the Planning scheme policy SC6.5 – FNQROC Regional Development Manual.	**Not applicable** No new lots are proposed.

9.4.3 Environmental performance code

9.4.3.1 Application

(1) This code applies to assessing:

(a) building work for outdoor lighting;

(b) a material change of use or reconfiguring a lot if:

(i) assessable development where the code is identified in the assessment criteriacolumn of a table of assessment; or

(ii) impact assessable development, to the extent relevant.

Note – Where for the purpose of lighting a tennis court in a Residential zone, a compliance statement prepared by a suitablyqualified person must be submitted to Council with the development application for building work.

(2) When using this code, reference should be made to Part 5.

9.4.3.2 Purpose

(1) The purpose of the Environmental performance code is to ensure development is designed andoperated to avoid or mitigate impacts on sensitive receiving environments.

(2) The purpose of the code will be achieved through the following overall outcomes:

(a) activities that have potential to cause an adverse impact on amenity of adjacent andsurrounding land, or environmental harm is avoided through location, design and operation of the development;

(b) sensitive land uses are protected from amenity related impacts of lighting, odour, airborneparticles and noise, through design and operation of the development;

(c) stormwater flowing over, captured or discharged from development sites is of a qualityadequate to enter receiving waters and downstream environments;

(d) development contributes to the removal and ongoing management of weed species.

9.4.3.3 Criteria for assessment

Table 9.4.3.3.a – Environmental performance code – assessable development

Performance outcomes	Acceptable outcomes	Applicant response
Lighting		
PO1	**AO1.1**	**Not applicable**

Performance outcomes	Acceptable outcomes	Applicant response
Lighting incorporated within development does not cause an adverse impact on the amenity of adjacent uses and nearby sensitive land uses.	Technical parameters, design, installation, operation and maintenance of outdoor lighting comply with the requirements of Australian standard AS4282-1997 Control of the obtrusive effects of outdoor lighting.	No outdoor lighting is proposed as part of this application.
	AO1.2 Development that involves flood lighting is restricted to a type that gives no upward component of light where mounted horizontally.	**Not applicable** No outdoor lighting is proposed as part of this application.
	AO1.3 Access, car parking and manoeuvring areas are designed to shield nearby residential premises from impacts of vehicle headlights.	**Not applicable** No outdoor lighting is proposed as part of this application.
Noise		
PO2 Potential noise generated from the development is avoided through design, location and operation of the activity. Note – Planning Scheme Policy SC6.4 – Environmental management plans provides guidance on preparing a report to demonstrate compliance with the purpose and outcomes of the code.	**AO2.1** Development does not involve activities that would cause noise related environmental harm or nuisance; or **AO2.2** Development ensures noise does not emanate from the site through the use of materials, structures and architectural features to not cause an adverse noise impact on adjacent uses.	**Complies with AO2.1** All activities would be undertaken accordance with an Environmental Management Plan to minimise and manage impacts. Refer to **Appendix K**.
	AO2.3 The design and layout of development ensures car parking areas avoid noise impacting directly on adjacent sensitive land uses through one or	**Complies with AO2.3** No car parking would be located adjacent a sensitive land use.

Performance outcomes	Acceptable outcomes	Applicant response
	more of the following: (a) car parking is located away from adjacent sensitive land uses; (b) car parking is enclosed within a building; (c) a noise ameliorating fence or structure is established adjacent to car parking areas where the fence or structure will not have a visual amenity impact on the adjoining premises; (d) buffered with dense landscaping. Editor's note - The *Environmental Protection (Noise) Policy 2008*, Schedule 1 provides guidance on acoustic quality objectives to ensure environmental harm (including nuisance) is avoided.	
Airborne particles and other emissions		
PO3 Potential airborne particles and emissions generated from the development are avoided through design, location and operation of the activity. Note – Planning Scheme Policy SC6.4 – Environmental management plans provides guidance on preparing a report to demonstrate compliance with the purpose and outcomes of the code.	**AO3.1** Development does not involve activities that will result in airborne particles or emissions being generated; or **AO3.2** The design, layout and operation of the development activity ensures that no airborne particles or emissions cause environmental harm or nuisance. Note - examples of activities which generally cause airborne particles include spray painting, abrasive blasting, manufacturing activities and car wash facilities. Examples of emissions include exhaust ventilation from basement or enclosed parking structures, air	**Complies with AO3.1** All activities would be undertaken accordance with an Environmental Management Plan to minimise and manage impacts. Refer to **Appendix K**.

Performance outcomes	Acceptable outcomes	Applicant response
	conditioning/refrigeration ventilation and exhaustion. The *Environmental Protection (Air) Policy 2008*, Schedule 1 provides guidance on air quality objectives to ensure environmental harm (including nuisance) is avoided.	
Odours		
PO4 Potential odour causing activities associated with the development are avoided through design, location and operation of the activity. Note – Planning Scheme Policy SC6.4 – Environmental management plans provides guidance on preparing a report to demonstrate compliance with the purpose and outcomes of the code.	**AO4.1** The development does not involve activities that create odorous emissions; or **AO4.2** The use does not result in odour that causes environmental harm or nuisance with respect to surrounding land uses.	**Complies with AO4.1** All activities would be undertaken accordance with an Environmental Management Plan to minimise and manage impacts. Refer to **Appendix K**.
Waste and recyclable material storage		
PO5 Waste and recyclable material storage facilities are located and maintained to not cause adverse impacts on adjacent uses. Note – Planning Scheme Policy SC6.4 – Environmental management plans provides guidance on preparing a report to demonstrate compliance with the purpose and outcomes of the code.	**AO5.1** The use ensures that all putrescent waste is stored in a manner that prevents odour nuisance and is disposed of at regular intervals.	**Complies with AO5.1** All waste activities would be undertaken accordance with an Environmental Management Plan to minimise and manage impacts. Refer to **Appendix K**.
	AO5.2 Waste and recyclable material storage facilities are located, designed and maintained to not cause an adverse impact on users of the premises and adjacent uses through consideration of: (a) the location of the waste and recyclable material storage areas in relation to the noise	**Complies with AO5.2** The waste storage areas would not be located adjacent a sensitive land use and would be in suitable receptacles.

Performance outcomes	Acceptable outcomes	Applicant response
	and odour generated; (b) the number of receptacles provided in relation to the collection, maintenance and use of the receptacles; (c) the durability of the receptacles, sheltering and potential impacts of local climatic conditions; (d) the ability to mitigate spillage, seepage or leakage from receptacles into adjacent areas and sensitive receiving waters and environments. Editor's note - the *Environmental Protection (Waste Management) Policy 2008* provides guidance on the design of waste containers (receptacles) to ensure environmental harm (including nuisance) is avoided.	
Sensitive land use activities		
PO6 Sensitive land use activities are not established in areas which will receive potentially incompatible impacts on amenity from surrounding, existing development activities and land uses.	**AO6.1** Sensitive land use activities are not established in areas that will be adversely impacted upon by existing land uses, activities and potential development possible in an area; or **AO6.2** Sensitive land activities are located in areas where potential adverse amenity impacts mitigate all potential impacts through layout, design, operation and maintenance.	**Not applicable** No sensitive land uses are proposed as part of this application.
Stormwater quality		

Performance outcomes	Acceptable outcomes	Applicant response
PO7 The quality of stormwater flowing over, through or being discharged from development activities into watercourses and drainage lines is of adequate quality for downstream environments, with respect to: (a) the amount and type of pollutants borne from the activity; (b) maintaining natural stream flows; (c) the amount and type of site disturbance; (d) site management and control measures.	**AO7.1** Development activities are designed to ensure stormwater over roofed and hard stand areas is directed to a lawful point of discharge.	**Complies with AO7.1** All stormwater generated by the development would be directed to a lawful point of discharge.
	AO7.2 Development ensures movement of stormwater over the site is not impeded or directed through potentially polluting activities.	**Not applicable** No polluting activities are proposed as part of this application.
	AO7.3 Soil and water control measures are incorporated into the activity's design and operation to control sediment and erosion potentially entering watercourses, drainage lines and downstream receiving waters. Note - Planning scheme policy - FNQROC Regional Development Manual provides guidance on soil and water control measures to meet the requirements of the *Environmental Protection Act 1994*. During construction phases of development, contractors and builders are to have consideration in their work methods and site preparation for their environmental duty to protect stormwater quality.	**Able to comply with AO7.3** Erosion and Sediment control practices would be employed at the time of construction.
Pest plants (for material change of use on vacant land over 1,000m^2)		
PO8 Development activities and sites provide for the removal of all pest plants and implement ongoing measures to ensure that pest plants do not reinfest the site or nearby sites. Editor's note - This does not remove or replace all land owner's obligations or responsibilities under the *Land*	**AO8.1** The land is free of declared pest plants before development establishes new buildings, structures and practices; or **AO8.2**	**Complies with AO8.1** No pest plants have been identified on the site.

Performance outcomes	Acceptable outcomes	Applicant response
Protection (Pest and Stock Route Management) Act 2002.	Pest plants detected on a development site are removed in accordance with a management plan prepared by an appropriately qualified person prior to construction of buildings and structures or earthworks. Note - A declaration from an appropriately qualified person validates the land being free from pest plants. Declared pest plants include locally declared and State declared pest plants.	

9.4.4 Filling and excavation code

9.4.4.1 Application

(1) This code applies to assessing:

(a) operational work for filling or excavation which is self-assessable or code assessable development if this code is an applicable code identified in the assessment criteria column of a table of assessment; or

(b) a material change of use or reconfiguring a lot if:

(i) assessable development where this code is identified as a prescribed secondary code in the assessment criteria column of a table of assessment; or

(ii) impact assessable development, to the extent relevant.

Note—This code does not apply to building work that is regulated under the Building Code of Australia.

(2) When using this code, reference should be made to Part 5..

9.4.4.2 Purpose

(1) The purpose of the Filling and excavation code is to assess the suitability of development for filling or excavation.

(2) The purpose of the code will be achieved through the following overall outcomes:

(a) filling or excavation does not impact on the character or amenity of the site and surrounding areas;

(b) filling and excavation does not adversely impact on the environment;

(c) filling and excavation does not impact on water quality or drainage of upstream, downstream or adjoining properties;

(d) filling and excavation is designed to be fit for purpose and does not create land stability issues;

(e) filling and excavation works do not involve complex engineering solutions.

9.4.4.3 Criteria for assessment

Table 9.4.4.3.a – Filling and excavation code – for self-assessable and assessable development

Performance outcomes	Acceptable outcomes	Applicant response
For self-assessable and assessable development		

Performance outcomes	Acceptable outcomes	Applicant response
Filling and excavation - General		
PO1 All filling and excavation work does not create a detrimental impact on the slope stability, erosion potential or visual amenity of the site or the surrounding area.	**AO1.1** The height of cut and/or fill, whether retained or not, does not exceed 2 metres in height. and Cuts in excess of those stated in A1.1 above are separated by benches/ terraces with a minimum width of 1.2 metres that incorporate drainage provisions and screen planting.	**Complies with AO1.1** No cut or fill would exceed 2 metres in height.
	AO1.2 Cuts are supported by batters, retaining or rock walls and associated benches/terraces are capable of supporting mature vegetation.	**Not applicable** No cuts are proposed.
	AO1.3 Cuts are screened from view by the siting of the building/structure, wherever possible.	**Not applicable** No cuts are proposed.
	AO1.4 Topsoil from the site is retained from cuttings and reused on benches/terraces.	**Not applicable** No cuts are proposed.
	AO1.5 No crest of any cut or toe of any fill, or any part of any retaining wall or structure is closer than	**Not applicable** No significant cut or fill is proposed.

Performance outcomes	Acceptable outcomes	Applicant response
	600mm to any boundary of the property, unless the prior written approval of the adjoining landowner has been obtained.	
	AO1.6 Non-retained cut and/or fill on slopes are stabilised and protected against scour and erosion by suitable measures, such as grassing, landscaping or other protective/aesthetic measures	**Not applicable** No significant cut or fill is proposed.
Visual Impact and Site Stability		
PO2 Filling and excavation are carried out in such a manner that the visual/scenic amenity of the area and the privacy and stability of adjoining properties is not compromised.	**AO2** The extent of filling and excavation does not exceed 40% of the site area, or 500m2 whichever is the lesser, except that AO2.1 does not apply to reconfiguration of 5 lots or more.	**Complies with AO2** No area of fill would exceed 500m^2.
	AO2.2 Filling and excavation does not occur within 2 metres of the site boundary.	**Complies with AO2.2** No filling or excavation would occur within 2 metres of a property boundary.
Flood and Drainage		
PO3 Filling and excavation does not result in a change to the run off characteristics of a site	**AO3.1** Filling and excavation does not result in the ponding of water on a site or adjacent land or	**Not applicable** No significant cut or fill is proposed.

Performance outcomes	Acceptable outcomes	Applicant response
which then have a detrimental impact on the site or nearby land or adjacent road reserves.	road reserves..	
	AO3.2 Filling and excavation does not result in an increase in the flow of water across a site or any other land or road reserves.	**Not applicable** No significant cut or fill is proposed.
	AO3.3 Filling and excavation does not result in an increase in the volume of water or concentration of water in a watercourse and overland flow paths.	**Not applicable** No significant cut or fill is proposed.
	AO3.4 Filling and excavation complies with the specifications set out in Planning Scheme Policy No SC5 – FNQROC Development Manual.	**Not applicable** No significant cut or fill is proposed.
Water Quality		
PO4 Filling and excavation does not result in a reduction of the water quality of receiving waters.	**AO4** Water quality is maintained to comply with the specifications set out in Planning Scheme Policy No SC5 – FNQROC Development Manual.	**Complies with AO4** The spoil disposal area would be bunded and erosion and sediment control practices employed during construction.
Infrastructure		
PO5	**AO5**	**Complies with AO5**

Performance outcomes	Acceptable outcomes	Applicant response
Excavation and filling does not impact on Public Utilities.	Excavation and filling is clear of the zone of influence of public utilities.	No excavation or fill would occur within a zone of influence of public utilities.

Appendix O

Acid Sulfate Soils Testing Results

MAKING COMPLEX EASY
A TETRA TECH COMPANY

135 Abbott Street
Cairns QLD 4870
T +61 7 4031 1336

Our ref: L83185 15874

Date: 3 March 2025

Douglas Shire Council

To Whom it May Concern,

Daintree River Grab sampling - Chromium Suite Results Report February 2025

RPS Environmental Consultant, Liam Honey visited the Daintree River Ferry Crossing site on 3 February 2025 to collect sand samples via Grab Sampler from the riverbed. Sand samples were collected from six (6) locations across the river channel and analysed for Chromium Suite to determine if Acid Sulfate Soils (ASS) are present within the soils and for particle size distribution.

Method

The Grab sampler was lower off the side of the boat and dropped onto the riverbed. The bottom surface impact triggers the spring-loaded release mechanism cause the sampler to close and collect the sand sample. The sampler is then pulled up back onto the boat for the sand sample to be collected into sampling bags.

Sand sampling was conducted according to the Guidelines for Sampling and Analysis of Lowland Acid Sulfate Soils (ASS) in Queensland 1998. The approved sampling technique under this manual is as follows:

Samples taken were placed into an air-tight polyethylene bag (with the air excluded). The combined sample of a particular sand product is then clearly marked with a permanent marker and placed into an esky containing ice to keep samples cool and minimize sulfide oxidation. The chilled samples were transported within a 24-hour timeframe to a NATA accredited laboratory for analysis.

All quality standards and procedures were carried out according to Australian Standard AS 4969- 2008, the Laboratory Methods Guidelines (2004) Ahern CR, McElnea AE, Sullivan LA and Guidelines for Sampling and Analysis of Lowland Acid Sulfate Soils (ASS) in Queensland 1998.

Sample locations

Refer to **Figure 1** below for the sand sample locations. The Hydrographic survey plan and sample locations are included in **Appendix A**.



Figure 1 Sand sample locations

Results

Sand samples taken from the bed of the Daintree River and were sent to a NATA accredited laboratory for analysis. The laboratory report of results is included in **Appendix B**, with a summary of the key results below in **Table 1**:

Table 1 – Sand sample results

Sample	Sulphur Trail (s-net Acidity %w/w S)	Acid Trail (a-net Acidity mol H^+/t)	pH KCl
S1	*0.0025*	*2.5*	8.7
S2	*0.0025*	*2.5*	7
S3	*0.0025*	*2.5*	6.8
S4	*0.0025*	*2.5*	6.6
S5	*0.0025*	*2.5*	6.6
S6	*0.0025*	*2.5*	7.2

Columns 2 & 3 must be compared against the Action Criteria >1000 tonnes disturbed column of **Table 2**

The particle size distribution of the sand can be seen in **Appendix B**.

Table 2 - Texture Based Acid Sulfate Soil Action Criteria (QASSTM)

Type of Material		Action Criteria 1-1000 Tonnes Disturbed		Action Criteria >1000 Tonnes Disturbed	
Texture Range MacDonald et al. (1990)	**Approx. Clay Content (%)**	**%S equiv. (oven-dry basis) e.g. S_{TOR} or S_{POS}**	**Mol H^+/tonne (oven-dry basis) e.g TPA or TSA**	**Sulfur trail %S oxidisable (oven-dry basis) e.g. S_{TOS} or S_{POS}**	**Acid Trail mol H^+/tonne (oven-dry basis) e.g. TPA or TSA**
Fine Medium to heavy clays, and silty clays	>40%	0.1	62	0.03	18
Medium Sandy loams to light clays	5-40	0.006	36		
Coarse Sandy to loamy sands and peats	<5	0.03	18		

Discussion

The Chromium Suite laboratory analysis results in **Table 1** show that all samples were below the weighted action criteria (*Ahern et al 1998*), refer to **Table 2**. The pH KCl for the samples above the weighted action criteria recorded between 6.6 to 8.7**.**

These results indicate that the sand samples do not require management actions with the use of lime.

Should you require any further details or clarification, please do not hesitate to contact RPS on (07) 4031 1336.

Yours sincerely,
for RPS AAP Consulting Pty Ltd

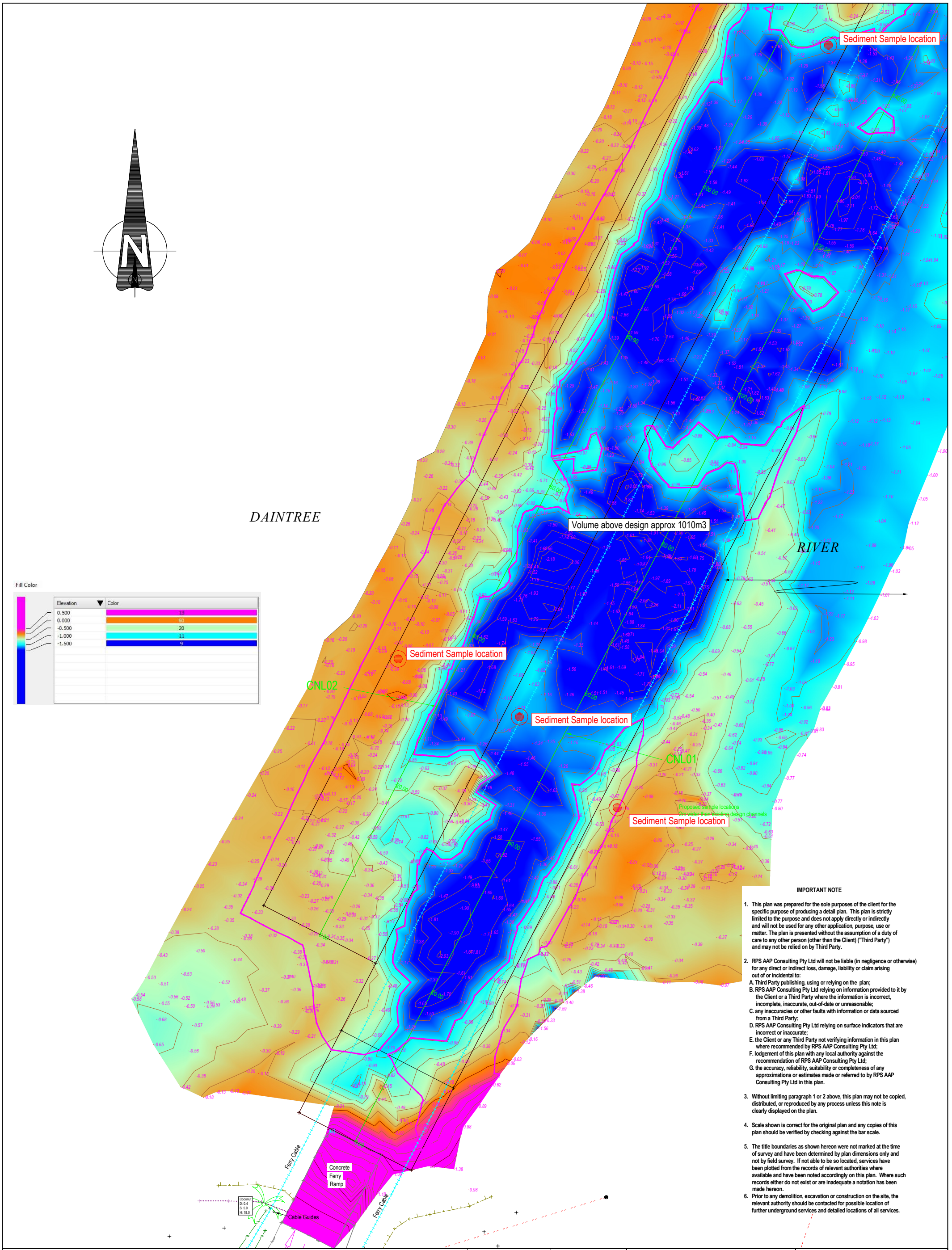


Monique Palmer
Senior Environmental Consultant
Monique.palmer@rpsconsulting.com

enc: Appendix A: Borehole Location Plan
Appendix B: SGS Analytical Report

APPENDIX A

Survey Plan



IMPORTANT NOTE

1. This plan was prepared for the sole purposes of the client for the specific purpose of producing a detail plan. This plan is strictly limited to the purpose and does not apply directly or indirectly and will not be used for any other application, purpose, use or matter. The plan is presented without the assumption of a duty of care to any other person (other than the Client) ("Third Party") and may not be relied on by Third Party.
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   E. the Client or any Third Party not verifying information in this plan where recommended by RPS AAP Consulting Pty Ltd;
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   G. the accuracy, reliability, suitability or completeness of any approximations or estimates made or referred to by RPS AAP Consulting Pty Ltd in this plan.
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4. Scale shown is correct for the original plan and any copies of this plan should be verified by checking against the bar scale.
5. The title boundaries as shown hereon were not marked at the time of survey and have been determined by plan dimensions only and not by field survey. If not able to be so located, services have been plotted from the records of relevant authorities where available and have been noted accordingly on this plan. Where such records either do not exist or are inadequate a notation has been made hereon.
6. Prior to any demolition, excavation or construction on the site, the relevant authority should be contacted for possible location of further underground services and detailed locations of all services.

NOTES

Level Datum: LAT (AHD levels Adjusted +1.58m)
Origin of Levels: PM123249
RL3.663 (Adjusted to LAT)
LAT levels adopted from KBR plan
"BEJ758-DW-CV-GEN-0004 Rev 1" provided by Douglas Shire Council.
LAT conversion in agreement with 2023 DTMR Semi Diurnal Tidal plane levels (Port Douglas Tidal plane levels)

Contour Interval: 0.2m
Index: 1.0m

Origin of Coordinates: GDA 2020
PM123249

Meridian: MGA

Field/Level Book:

0 10 20
metres

SCALE 1:200 IS APPLICABLE ONLY TO THE ORIGINAL SHEET SIZE (A1).
(1:400 @ A3)

AMENDMENTS	
PROJECT MANAGER	D Pinkham
SURVEYED	AD 03/02/25
DRAWN	DGP
CHECKED	
CAD REF	149780-137.MJO
SHEET	1 OF SHEETS 2
DRAFTING CHECKED	
SHEET SIZE	A1

Douglas Shire Council

Daintree Ferry Crossing
Hydrographic Survey
Daintree River
Cape Tribulation Road

RPS AAP Consulting Pty Ltd
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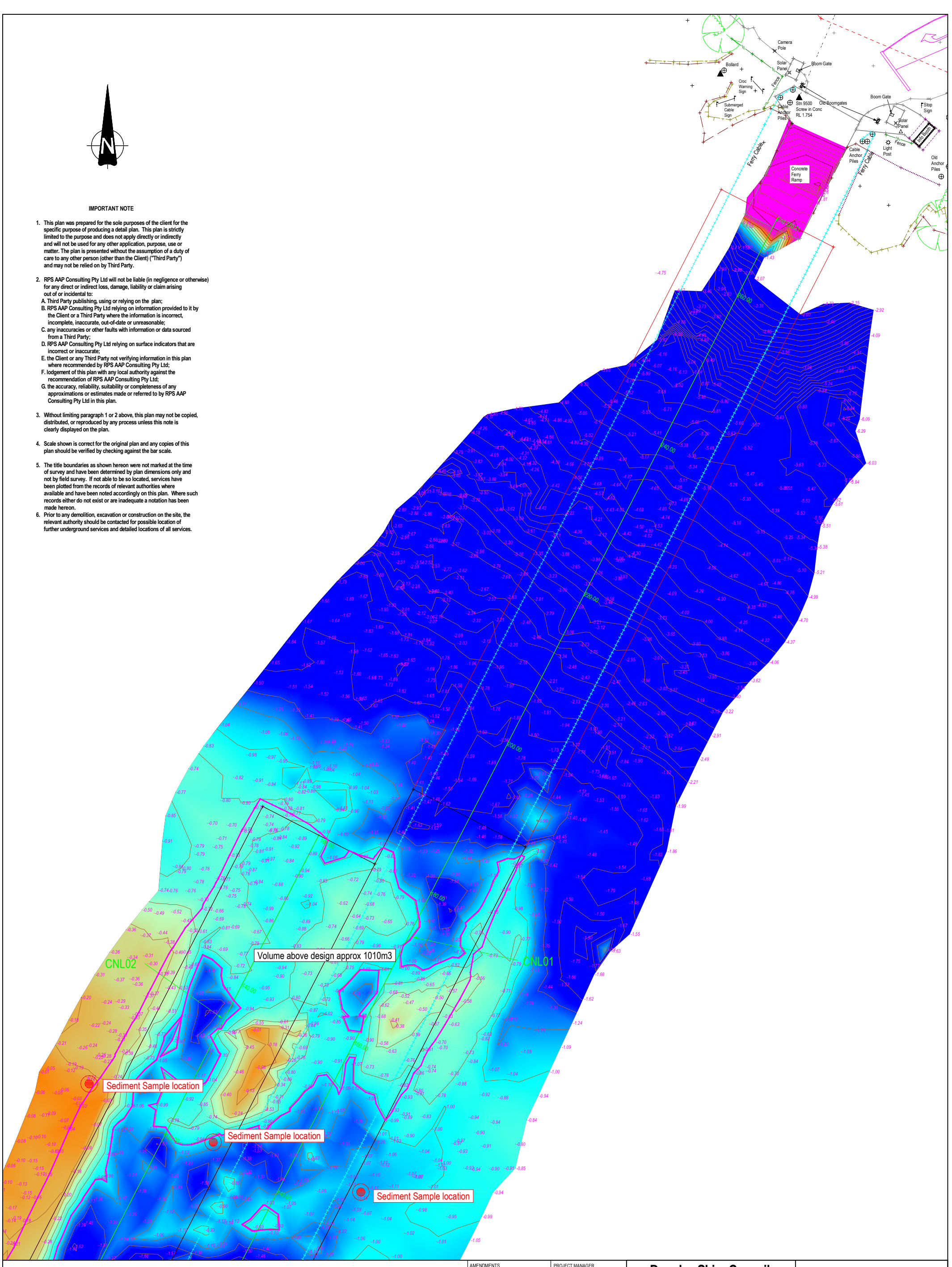
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Field/Level Book:

SCALE 1:200 IS APPLICABLE ONLY TO THE ORIGINAL SHEET SIZE (A1).
(1:400 @ A3)

AMENDMENTS	PROJECT MANAGER D Pinkham	**Douglas Shire Council**	RPS AAP Consulting Pty Ltd ACN 117 883 173 5954 Captain Cook Highway Craiglie QLD 4877 T +61 7 4098 1148 F +61 7 4031 2942 W rpsgroup.com
	SURVEYED AD 03/02/25		
	DRAWN DGP	**Daintree Ferry Crossing** **Hydrographic Survey** **Daintree River** **Cape Tribulation Road**	
CHECKED	CAD REF 149780-137.MJO	SHEET 2 OF SHEETS 2	
DRAFTING CHECKED		SHEET SIZE A1	

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APPENDIX B

SGS Analytical Report

ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS		LABORATORY DETAILS	
Contact	Megan Davis	Manager	Jon Dicker
Client	RPS AAP CONSULTING PTY LTD	Laboratory	SGS Cairns Environmental
Address	PO BOX 1559 FORTITUDE VALLEY QLD 4006	Address	Unit 2, 58 Comport St Portsmith QLD 4870
Telephone	+61 7 4031 1336	Telephone	+61 07 4035 5111
Facsimile	(Not specified)	Facsimile	+61 07 4035 5122
Email	Megan.Davis1@rpsconsulting.com	Email	AU.Environmental.Cairns@sgs.com
Project	**604-OEENVCNS-387289_Daintree Ferry_CrSui**	SGS Reference	**CE179931 R0**
Order Number	**604-OEENVCNS-387289**	Date Received	03 Feb 2025
Samples	6	Date Reported	17 Feb 2025

COMMENTS

Accredited for compliance with ISO/IEC 17025 - Testing. NATA accredited laboratory 2562(3146)

SIGNATORIES

Jon Dicker
Manager Northern QLD

Parameter	Units	Sample Number Sample Matrix Sample Date Sample Name LOR	CE179931.001 Soil 03 Feb 2025 S1	CE179931.002 Soil 03 Feb 2025 S2	CE179931.003 Soil 03 Feb 2025 S3	CE179931.004 Soil 03 Feb 2025 S4
Moisture Content Method: AN002 Tested: 4/2/2025						
% Moisture	%w/w	0.5	**22**	**22**	**23**	**21**
TAA (Titratable Actual Acidity) Method: AN219 Tested: 11/2/2025						
pH KCl	pH Units	-	**8.7**	**7.0**	**6.8**	**6.6**
Titratable Actual Acidity	kg H2SO4/T	0.25	<0.25	<0.25	<0.25	<0.25
Titratable Actual Acidity (TAA) moles H+/tonne	moles H+/T	5	<5	<5	<5	<5
Titratable Actual Acidity (TAA) S%w/w	%w/w S	0.01	<0.01	<0.01	<0.01	<0.01
Sulphur (SKCl)	%w/w	0.005	-	-	-	-
Chromium Reducible Sulfur (CRS) Method: AN217 Tested: 11/2/2025						
Chromium Reducible Sulfur (Scr)	%	0.005	<0.005	<0.005	<0.005	<0.005
Chromium Reducible Sulfur (Scr)	moles H+/T	5	<5	<5	<5	<5
Acid Neutralising Capacity (ANC) Method: AN214 Tested: 13/2/2025						
Acid Neutralisation Capacity (ANCBT) as % $CaCO_3$	% CaCO3	0.1	**0.1**	<0.1	**0.1**	**0.3**
Acid Neutralisation Capacity (ANCBT) as kg H_2SO_4/t	kg H2SO4/T	0.1	**1.2**	**0.6**	**1.2**	**2.5**
ANC as % $CaCO_3$	% CaCO3	0.1	**0.1**	<0.1	**0.1**	**0.3**
Lime Equivalence	% CaCO3	0.1	**0.1**	<0.1	**0.1**	**0.3**
Acid Neutralisation Capacity (ANCBT) as acidity units	moles H+/T	3	**25**	**12**	**25**	**50**
Acid Neutralisation Capacity (ANCBT) as % S	%w/w S	0.005	**0.040**	**0.020**	**0.040**	**0.080**
Chromium Suite Net Acidity Calculations Method: AN220 Tested: 13/2/2025						
s-Net Acidity	%w/w S	0.005	<0.005	<0.005	<0.005	<0.005
s-Net Acidity without ANC	%w/w S	0.005	<0.005	<0.005	<0.005	<0.005
a-Net Acidity	moles H+/T	5	<5	<5	<5	<5
Liming Rate	kg CaCO3/T	0.1	<0.1	<0.1	<0.1	<0.1
Verification s-Net Acidity	%w/w S	-20	**-0.03**	**-0.01**	**-0.02**	**-0.05**
a-Net Acidity without ANCBT	moles H+/T	5	<5	<5	<5	<5
Liming Rate without ANCBT	kg CaCO3/T	0.1	<0.1	<0.1	<0.1	<0.1
Particle sizing of soils by sieving Method: AN005 Tested: 14/2/2025						
Passing 2.00mm	%w/w	1	**57**	**76**	**84**	**81**
Retained 2.00mm	%w/w	1	**43**	**24**	**16**	**20**
Passing 600µm	%w/w	1	**8**	**12**	**5**	**33**
Retained 600µm	%w/w	1	**49**	**64**	**79**	**47**
Passing 300µm	%w/w	1	**1**	**2**	**2**	**10**
Retained 300µm	%w/w	1	**7**	**10**	**3**	**23**
Passing 212µm	%w/w	1	<1	**1**	**2**	**6**
Retained 212µm	%w/w	1	<1	<1	<1	**4**
Passing 63µm	%w/w	1	<1	<1	**1**	**3**
Retained 63µm	%w/w	1	<1	<1	<1	**3**

Parameter	Units	LOR	Sample Number: CE179931.005 Sample Matrix: Soil Sample Date: 03 Feb 2025 Sample Name: S5	Sample Number: CE179931.006 Sample Matrix: Soil Sample Date: 03 Feb 2025 Sample Name: S6
Moisture Content Method: AN002 Tested: 4/2/2025				
% Moisture	%w/w	0.5	**22**	**23**
TAA (Titratable Actual Acidity) Method: AN219 Tested: 11/2/2025				
pH KCl	pH Units	-	**6.6**	**7.2**
Titratable Actual Acidity	kg H2SO4/T	0.25	<0.25	<0.25
Titratable Actual Acidity (TAA) moles H+/tonne	moles H+/T	5	<5	<5
Titratable Actual Acidity (TAA) S%w/w	%w/w S	0.01	<0.01	<0.01
Sulphur (SKCl)	%w/w	0.005	-	-
Chromium Reducible Sulfur (CRS) Method: AN217 Tested: 11/2/2025				
Chromium Reducible Sulfur (Scr)	%	0.005	<0.005	<0.005
Chromium Reducible Sulfur (Scr)	moles H+/T	5	<5	<5
Acid Neutralising Capacity (ANC) Method: AN214 Tested: 13/2/2025				
Acid Neutralisation Capacity (ANCBT) as % $CaCO_3$	% CaCO3	0.1	**0.1**	**0.1**
Acid Neutralisation Capacity (ANCBT) as kg H_2SO_4/t	kg H2SO4/T	0.1	**1.2**	**1.2**
ANC as % $CaCO_3$	% CaCO3	0.1	**0.1**	**0.1**
Lime Equivalence	% CaCO3	0.1	**0.1**	**0.1**
Acid Neutralisation Capacity (ANCBT) as acidity units	moles H+/T	3	**25**	**25**
Acid Neutralisation Capacity (ANCBT) as % S	%w/w S	0.005	**0.040**	**0.040**
Chromium Suite Net Acidity Calculations Method: AN220 Tested: 13/2/2025				
s-Net Acidity	%w/w S	0.005	<0.005	<0.005
s-Net Acidity without ANC	%w/w S	0.005	<0.005	<0.005
a-Net Acidity	moles H+/T	5	<5	<5
Liming Rate	kg CaCO3/T	0.1	<0.1	<0.1
Verification s-Net Acidity	%w/w S	-20	**-0.02**	**-0.03**
a-Net Acidity without ANCBT	moles H+/T	5	<5	<5
Liming Rate without ANCBT	kg CaCO3/T	0.1	<0.1	<0.1
Particle sizing of soils by sieving Method: AN005 Tested: 14/2/2025				
Passing 2.00mm	%w/w	1	**67**	**73**
Retained 2.00mm	%w/w	1	**33**	**27**
Passing 600µm	%w/w	1	**11**	**13**
Retained 600µm	%w/w	1	**56**	**60**
Passing 300µm	%w/w	1	**3**	**3**
Retained 300µm	%w/w	1	**8**	**10**
Passing 212µm	%w/w	1	**3**	**2**
Retained 212µm	%w/w	1	<1	<1
Passing 63µm	%w/w	1	**2**	<1
Retained 63µm	%w/w	1	<1	**1**

MB blank results are compared to the Limit of Reporting
LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.
DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula : *the absolute difference of the two results divided by the average of the two results as a percentage.* Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

Acid Neutralising Capacity (ANC) Method: ME-(AU)-[ENV]AN214

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery
Acid Neutralisation Capacity (ANCBT) as % $CaCO_3$	LB137330	% CaCO3	0.1	<0.1	0%	104%
Acid Neutralisation Capacity (ANCBT) as kg H_2SO_4/t	LB137330	kg H2SO4/T	0.1	<0.1	0%	NA
ANC as % $CaCO_3$	LB137330	% CaCO3	0.1	<0.1	0%	NA
Lime Equivalence	LB137330	% CaCO3	0.1	<0.1		
Acid Neutralisation Capacity (ANCBT) as acidity units	LB137330	moles H+/T	3	<3	0%	NA
Acid Neutralisation Capacity (ANCBT) as % S	LB137330	%w/w S	0.005	<0.005	0%	NA

METHOD	METHODOLOGY SUMMARY
AN002	The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
AN005	The particle size distribution of a soil is determined by wet sieving, using a maximum of 900 mL of deionised water to sieve all fractions down to 75 µm. Referenced to AS1289.3.6.1 and AS1141.11.
AN214	Acid Neutralising Capacity (ANC)or Neutralising Value (NV): The crushed or as received sample is reacted with excess normal acid (HCl) and then back titrated with standard sodium hydroxide to determine the acid consumed. The result is expressed as kg H2SO4/tonne or %CaCO3. Based on AS4969-13.
AN217	Dried pulped sample is mixed with acid and chromium metal in a rapid distillation unit to produce hydrogen sulfide (H2S) which is collected and titrated with iodine (I2(aq)) to measure SCR.
AN219	Dried pulped sample is extracted for 4 hours in a 1 M KCl solution. The ratio of sample to solution is 1:40. The extract is titrated for acidity. Calcium, magnesium, and sulfur are determined by ICP-AES.
AN220	Chromium Suite: Scheme for the calculation of net acidities and liming rates using a Fineness Factor of 1.5.

FOOTNOTES

IS	Insufficient sample for analysis.	LOR	Limit of Reporting
LNR	Sample listed, but not received.	↑↓	Raised or Lowered Limit of Reporting
*	NATA accreditation does not cover the performance of this service.	QFH	QC result is above the upper tolerance
		QFL	QC result is below the lower tolerance
**	Indicative data, theoretical holding time exceeded.	-	The sample was not analysed for this analyte
***	Indicates that both * and ** apply.	NVL	Not Validated

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received.
Solid samples expressed on a dry weight basis.

Where "Total" analyte groups are reported (for example, Total PAHs, Total OC Pesticides) the total will be calculated as the sum of the individual analytes, with those analytes that are reported as <LOR being assumed to be zero. The summed (Total) limit of reporting is calcuated by summing the individual analyte LORs and dividing by two. For example, where 16 individual analytes are being summed and each has an LOR of 0.1 mg/kg, the "Totals" LOR will be 1.6 / 2 (0.8 mg/kg). Where only 2 analytes are being summed, the " Total" LOR will be the sum of those two LORs.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

If reported, measurement uncertainty follow the ± sign after the analytical result and is expressed as the expanded uncertainty calculated using a coverage factor of 2, providing a level of confidence of approximately 95%, unless stated otherwise in the comments section of this report.

Results reported for samples tested under test methods with codes starting with ARS-SOP, radionuclide or gross radioactivity concentrations are expressed in becquerel (Bq) per unit of mass or volume or per wipe as stated on the report. Becquerel is the SI unit for activity and equals one nuclear transformation per second.
Note that in terms of units of radioactivity:

a. 1 Bq is equivalent to 27 pCi
b. 37 MBq is equivalent to 1 mCi

For results reported for samples tested under test methods with codes starting with ARS-SOP, less than (<) values indicate the detection limit for each radionuclide or parameter for the measurement system used. The respective detection limits have been calculated in accordance with ISO 11929.

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-gb/environment-health-and-safety.

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